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ABSTRACT

Research was conducted into the specific characteristics of brief, impromptu essay writing. A random sample of 806 essays was taken from the more than 80,000 written for the College Board's English Composition Achievement Test (ECT) in 1979. Using a special taxonomy of 20 writing characteristics, these essays were subjected to a second reading in fall 1980 to determine which of the characteristics most influenced rater judgments of writing quality. Among other analyses, scores developed for the quality of each of the characteristics were compared to holistic scores on the same essays obtained for the regular ECT administration. The results showed that certain characteristics of discourse, such as organization, transition, use of supporting evidence, and originality, influenced raters' judgments more than did such syntactic and lexical characteristics as subject-verb agreement, punctuation, and pronoun usage. The results suggest that English composition courses should emphasize discourse skills. (Appendixes contain copies of the ECT, essay evaluation forms and instructions used by raters, a questionnaire given to the raters before the evaluation, extensive tables of data, and a list of the names of the raters.) (Author/FL)

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Perceptions of Writing Skill

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Educational Testing Service

College Board Report No. 82-4

ETS RR No. 82-47

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ABSTRACT

A random sample of 806 essays was taken from over 80,000 essays written for the College Board's English Composition Achievement Test (ECT) during December 1979. Using a special taxonomy of 20 writing characteristics, these essays were subjected to a second special reading in September 1980 to determine which of these 20 writing characteristics most influenced judgments of writing quality. Among other analyses, scores developed for the quality of each of the 20 writing characteristics were used to "postdict" holistic scores on the same essays obtained for the regular ECT administration. The results showed that certain characteristics of discourse, in contrast to syntactic and lexical characteristics, influenced judgments the most. The characteristics of discourse included organization, transition, use of supporting evidence, and the originality of ideas presented. In the sample examined, traditional syntactic emphases—such as subject-verb agreement, punctuation, and pronoun usage—had less influence on scores assigned. The results suggest that instruction in English composition courses should emphasize discourse skills.

INTRODUCTION

This is a report of a research investigation into the specific characteristics of brief, impromptu essay writing. It is based on a national sample of essays evaluated by national samples of English teachers and professors. The sample of essays was obtained from the December 1979 administration of the College Board's Achievement Test in English Composition, which includes an essay written during a 20-minute period of time. A total of 806 essays was randomly sampled from over 85,000 essays written by students applying to colleges that required College Board Achievement Tests. These colleges are, for the most part, more selective than the average college. Therefore, the students represented in the sample of essays examined are, taken as a whole, above average.

The English teachers and professors who read the essays were from two groups. The first group consisted of the readers who were assembled for scoring the ECT essay holistically as a regular part of the December ECT administration. Those readers come from all parts of the country and represent both secondary and post-secondary institutions. The second group of readers were 20 college professors, sampled nationally, who participated in a special holistic and analytic reading of 806 of the same essays.

The purpose of the project was to begin to explore the characteristics of the writing of entering college students as perceived by teachers and professors of English, generally, and to attempt to isolate and describe important elements of the type of essay studied. Other research in progress will use the data base developed to examine new approaches to the assessment of writing skill.

Background of the Problem

A thesis of this investigation is that there exist a number of major obstacles that operate in our society that obstruct the development of writing skills. Research, as well as casual observation, suggests that writing is a complex skill mastered only through lengthy, arduous effort. Few students in high schools or in universities, and even fewer adults, ever approach the level of effort and time needed to learn to write well. In the average college, instruction in English composition is usually restricted to the freshman year. Past this point in the educational cycle, there are relatively few opportunities to learn skills that were not imparted earlier. For those who manage to enter graduate or professional schools, there exist some further opportunities, but only a handful of such schools have strong writing programs.

Another major obstacle to effective writing instruction is that many English teachers are ill-equipped to teach writing and feel uncomfortable in their efforts to do so. Many programs that prepare English teachers concentrate heavily on literature and give limited attention to writing. There is even less emphasis on the teaching of writing, a skill that, like writing itself, can be learned only through practice. In minority and urban learning settings, these first two obstacles—insufficient teacher time and training—are exacerbated.

A third major obstacle to the improvement of writing skill is that teachers often disagree in their perceptions of it. Even though English teachers at times agree on writing standards and criteria (Diederich 1974), they do not agree on the degree to which any given criterion should affect the score they assign to a paper. When scoring the same set of papers—even after careful instruction in which criteria are clearly defined and agreed upon—teachers assign a range of grades on any given paper (Godshalk, Swineford, and Coffman 1966). The standards that define good writing apparently do not serve well when scores are assigned to a piece of writing. Research to date suggests that the lack of agreement in evaluating student writing has two aspects: teachers do not agree on how much weight to assign particular writing characteristics in scoring any one essay nor on how much weight each characteristic should be given generally (Thompson 1976). The student, moreover, needs to know more than a score in order to focus his or her efforts in learning to write better.

The Need for Descriptions of Writing

When it is considered that the average student is exposed to only a limited set of teachers, it is clear that what the student learns about writing may be very limited and biased. The unfortunate student who is exposed primarily to teachers with poor training in writing and with little training in the teaching of writing stands only a meager chance of learning to write well. This situation calls for careful descriptions of the elements of writing skill, as viewed by

competent teachers of that skill. Such descriptions might inspire more students to teach themselves and thus in a sense create instructional time where it did not exist before.

There is a special administration each December of the English Composition Test (ECT) that affords a special opportunity for research on national perceptions of writing skill. For this administration of the test students write a 20-minute essay. (See Appendix A for a sample ECT essay question and answer sheet.) The essays are scored independently by two different English teachers assigned randomly from a national group of English teachers. Their coded scores are entered on a scannable answer sheet that is used also for scoring the multiple-choice portion of the ECT. A scaled composite score is obtained by weighting the two portions.

The ECT data can be matched with other data obtained on students from the Student Descriptive Questionnaire (SDQ) and from scores on the Scholastic Aptitude Test (SAT) and the Test of Standard Written English (TSWE). A copy of the SDQ is included as Appendix B to this report. In summary, data available from the December ECT administrations include:

- Two scores, obtained independently, on a 20-minute essay
- An ECT multiple-choice test score (based on 70 objective questions)
- A composite score that combines the essay and the multiple-choice portions (with a weight of .33 given the essay score and a weight of .66 given to the multiple-choice score)
- SDQ responses (which include ethnic identification, best language, and numerous other background variables)
- SAT-verbal and SAT-mathematical scores
- A TSWE score (based on 50 multiple-choice questions).

This December ECT administration represents an important data base that, if supplemented with additional data, can be used for the description of skills needed. More than 80,000 students take this test each year. In planning for this project, it was reasoned that if a sample of these students were drawn, and if their essays were carefully analyzed, then a national representation of writing could be assembled. It is useful at this point to describe the processes used in the development of tests such as the ECT to provide a better understanding of this data base and how it might be supplemented.

Direct and Indirect Assessment

The English subject specialists at Educational Testing Service customarily distinguish between direct and indirect measurement of writing skills. The direct measurement of writing skills or ability employs the written composition or essay. The student or examinee is presented with the task of writing a composition on a specified topic within a given time period and without the aid of any resources such as dictionaries or rhetoric books. It is often argued that this kind of writing task bears little similarity to the actual process of writing that people engage in, in daily life, and to some extent this criticism is true. People in business who write memorandums, letters, and position papers regularly use many different resources and develop several drafts in the process of communication. Students, also, when writing term papers or research reports, will typically employ many of the resources of the library in their efforts to produce quality work. Still, for the purposes of measurement of any specified skill or body of knowledge, the constraints established are necessary to ensure the accuracy of the measurement, so that the scores or quantification value attached to the results of the measurement process can be comparable. These constraints are often stated as "under testing conditions." However, necessary constraints for the successful operation of standardized testing also have their counterpart in the classroom where students regularly demonstrate their skills and knowledge "under testing conditions." Not to belabor the point, it is worth emphasizing that in the direct measurement of writing ability the necessary constraints found in the process are not unnatural to the act of writing but have their analogs in the testing situations in millions of American classrooms.

The indirect measurement of writing skills employs an objective or multiple-choice instrument for which the content specifications have been developed by a group of experts, typically English teachers and scholars. The skills and knowledge being tested reflect the judgment of the group of experts. When the experts agree that the content of the test is a fair and representative sampling of the wider domain of all possible writing skills that are taught in some standard English course, the test is said to have content validity. The justification for the use of multiple-choice tests in the measurement of writing skills is contained in various research documents. Essentially, the research was designed to test the hypothesis that a student who is judged by experts to have written excellent compositions over an extended period of time will more than likely score very well on an objective test of discrete writing skills. Correlations were obtained between students' scores on both the direct (essay) and the indirect (multiple-choice) measures and were found to be sufficiently high (.7) to conclude that the validity of the multiple-choice items was established (Godshalk, Swineford, and Coffman 1966). The same research also suggests that the most reliable *and* valid measure of writing skills is a combination of multiple-choice items and a short essay scored holistically.

There are two major problems in the assessment of writing skills. The first has to do with the English profession, and the second with the measurement profession. It is probably true that the attitude of disbelief in the efficacy

of objective testing of writing skills is nearly universal among English faculties. In spite of persuasive research that indicates the contrary, most English and writing teachers remain convinced that the only way to gauge whether a person can write well or poorly is to assign him a writing task and look at the results—the direct measurement method. The second problem is one that matters greatly to the measurement specialists. The essay as a measurement device is limited as to sampling (only one, two, or three essays can be written at one sitting), and scoring the essay even with trained readers agreeing on standards is notoriously unreliable. Therefore, while the most efficient and reliable measurement of writing ability is the objective method (indirect), the essay retains the highest face validity. When scored under standardized conditions and combined with the objective measure, it has been found to contribute to the overall reliability of the composite test score.

Both methods of measuring writing ability are used in several testing programs developed and administered by ETS. Three College Board programs use essay components in English tests: the English Composition Achievement Test of the Admissions Testing Program, the General Examination in English Composition of the College Level Examination Program, and the English Language and Composition and English Literature and Composition examinations in the Advanced Placement Program. These last two examinations are each three hours long, one and half of which are devoted to writing essays. Clearly, the essay, for all its weaknesses as the instrument for direct measurement, contributes in other ways to the assessment of writing skills; its face, content, and construct validity compensate for its relative unreliability.

The Development of Essay Questions for Testing Purposes

At Educational Testing Service, essay questions for testing purposes are developed over a long period of time—at least a year and a half and often two years. It should be clearly noted that questions developed for nationally administered testing programs employ procedures and constraints markedly different from those used by classroom teachers when they devise tests for their students.

Three assumptions are taken into account when ETS staff, working either alone or in conjunction with faculty committees, write essay questions for use on national examinations. These are not principles established *ex nihilo*, but rather have evolved from trial and error, planned studies and research, and practical experience over many years.

1. The question should present a topic of the widest possible general interest to a diverse population. Questions on contemporary controversial issues may be needlessly provocative and are to be avoided.

2. The question should be as brief as clarity will allow and supply the student with an organizing principle in order for the student to make the best use of limited time. For example, the directions will tell the student "to compare and contrast" or "to provide evidence from your reading, study, or experience" or "to agree or disagree with" some stated observation or principle.

3. The vocabulary and the concepts presented in the topic should not be too difficult for the ordinary student to understand immediately. Since the purpose of the test is to elicit a sample of writing skill, rather than formal knowledge of language or writing, and then to rank-order the essays based on standardized scoring procedures, the question itself must function as an opening device for, not an impediment to, the flow of ideas and language. Hence, essay questions for testing purposes are always designed to be of average difficulty.

Determining exactly what the essay question designed for a test is supposed to do is the responsibility of a committee of examiners. For the English Composition Test the committee is composed of five English teachers, three from college and two from secondary school. There are two purposes for including an essay in the ECT. The first is to demonstrate to the English profession, especially the secondary school teachers, that writing as an act of composition is a highly valued set of skills to learn and to teach. The second is to take a direct sample of some writing skills that cannot be easily measured by multiple-choice questions. These skills are 1) the ability to organize ideas in logical and coherent expository prose; 2) the ability to structure thought in a recognizable rhetorical pattern, i.e., the simple beginning, middle, and end; 3) the ability to demonstrate fluency and ease in the invention of appropriate syntactical patterns; and 4) the ability to identify and employ an appropriate tone and style to match a presumed audience.

These skills, logical organization, rhetorical structuring, fluency, and control over style and tone, are different from knowledge of grammar and punctuation, spelling, capitalization, etc. English teachers tend to think of the former as "higher" or at least more sophisticated skills that are acquired more slowly than the latter and only after much practice. It is these higher skills that the essay in the English Composition Test is designed to test, albeit only in a general way.

Any measurement instrument is limited in its function by practical necessities as well as by the variables inherent in the measurement process itself. In the time allowed for students to take one of the College Board's Achievement Tests, it has been proved possible that the specified domain can be adequately sampled with about 100 objective questions in an hour's time. In the English Composition Test, it has been found that the test and score reliability are not significantly diminished if 20 minutes of the hour were given to a direct measure using an essay question and the remaining 40 minutes were used for 70 objective questions. Experience with the 40-minute, the 30-minute, and the 20-minute essay over the years in different testing programs convinced the committee of examiners that, for the pur-

poses of the ECT, the 20-minute essay offered adequate time to sample in a general way the four abilities listed above.

Previous Research of a Similar Nature

We have already referred to some previous research on English composition that is in some ways similar to that undertaken for the present project. A few more details on these and other studies will serve to better introduce the topic at hand. It should be noted, however, that a number of prominent studies of English composition are not mentioned here because they did not include any analysis of the content of essays, which is the focus here.

We are, of course, particularly indebted to the early work of Diederich and colleagues previously mentioned. In that research, described in a number of publications (e.g., Diederich, French, and Carlton [1961]; Diederich [1974]; French [1962], readers from a broad range of professions—teachers, scientists, writers, lawyers, businessmen—assigned holistic scores and wrote detailed comments on 300 essays. The comments were then grouped into five areas: ideas, form, flavor, mechanics, and wording. These comment areas were then related to a factor analysis and to the holistic scores. French (1962) lamented the lack of agreement among the readers, but indicated three areas of commentary where there was relatively more agreement: ideas, form, and flavor. French concluded that improvement in both instruction and direct measurement could be achieved if readers concentrated on a limited set of writing characteristics (such as these three) and if students were made aware through test directions what the readers' emphases were.

A second significant effort along these same lines was that of Page (see, for example, 1968a, 1968b). While Page's research was aimed at the use of computers in scoring essays, some of the initial work was focused on the development of judgmental scales. Using Diederich's traits (with the exception that "flavor" was replaced by "creativity"), Page (1968a) had English teachers judge 256 essays on each of the five traits. Each of the five qualities received eight ratings, but it was observed that the traits were highly intercorrelated, suggesting strong halo effects. Nevertheless, an analysis of variance yielded a significant trait-by-essay interaction, supporting the discriminant validity of the ratings. In another analysis, Page (1968b) showed that computer simulations correlated highly with both overall judgments and with judgments of the five specific traits.

Related to the Page research was a study reported by Hiller, Marcotte, and Martin (1969). In this study, the objective was to examine three particular characteristics of writing because it was believed that single words or discrete phrases might serve as cues to the presence of the characteristics. These three characteristics were opinionation, exaggeration, and vagueness; the essays analyzed were the same as those used by Page. Words and phrases were identified that were associated with the three characteristics, and these were used to develop scores for each. Finally, the three constructs so developed were used in multiple correlations to predict the five judgments developed by Page. The highest multiple correlation obtained (.49) was with ideas, and the lowest (.26) was with mechanics. Beyond these predictive uses, it was believed that the variables observed would be useful as feedback to students in writing instruction.

McColly (1970) described a number of research efforts, including one of his own in which data from an Italian study was subjected to a factor analysis. Four factors emerged that loaded highest on ratings of originality, appearance, word form, and adequacy of thought. An interesting aspect of this study was that there was no organizational factor, even though a low correlation of .35 was obtained between organization of ideas and the fourth factor, adequacy of thoughts.

Thompson (1976) related holistic scores to a set of seven types of errors encountered in writing. In a freshman English class (N=45), students wrote essays which were scored holistically, and errors were annotated in detail. The seven types of errors indicated were lack of unity, lack of clarity, unsupported statements, judgment errors, lack of coherence, wordiness, and mechanical errors. Errors in these areas were counted, with the number of errors for each 75 words written used as a score. The highest correlation with the holistic score (.63) was obtained with the unsupported statement score, and five of the seven error scores (excluding only wordiness and mechanical errors) contributed significantly to the overall multiple correlation (.89) predicting the holistic score. The small number of essays studied and of readers used (three) limit the usefulness of this study, but the methods used are of interest.

The relative importance of certain elements of composition was also examined by Harris (1977). Among other procedures, a total of 7,855 corrections, annotations, and end-of-paper comments were used. It was concluded that evaluations were more often based on content, organization, and appropriateness of expression than on sentence structure, mechanics, or usage. Moreover, sentence variety was considered more important than sentence structure. An often-observed phenomenon was reported once again: while teachers were in basic agreement on basic concepts of evaluation, there appeared to be a discrepancy between theory and practice when compositions were actually evaluated.

Stewart and Grobe (1979) studied essays written by fifth-, eighth-, and eleventh-grade students in Canada. An overall quality rating of the essays (a holistic score) was related to nine variables, including the number of words written and the number of spelling errors. At all three grades, by far the highest correlations with the overall quality score were with these two mechanical counts. The other variables attempted to assess syntactic maturity through indexes such as words per T-unit and similar linguistic features. While these syntactic maturity indexes did

not correlate well with the overall quality rating, they did generally add significantly to the multiple correlation with the holistic score obtainable with the best predictors, i.e., spelling errors and number of words.

Another experimental study, similar to that of Harris (1977), was conducted by Freedman (1979). Freedman rewrote a number of essays written by students in four California Bay Area colleges (ranging from highly selective to open admission), such that they were either strong or weak on each of four traits: content, organization, sentence structure, and mechanics. Each of 12 carefully selected evaluators was then given a packet of randomly ordered essays, some rewritten and some not. The fact that some essays had been rewritten was concealed from the evaluators. An analysis of variance showed that the largest main effect was for the content variable, and the next largest main effect was for the organization variable. Mechanics also had a significant, but smaller, effect; however, sentence structure had no significant effect on the holistic scores assigned by the evaluators. Interaction effects showed that only if an essay had strong organization did the strength or weakness of the mechanics or sentence structure make a difference. Freedman concluded from these analyses that an important pedagogical implication was that teachers should aim more to help students develop and organize their ideas logically. Many teachers emphasize sentence structure and mechanics in courses while, in fact, they value but do not emphasize content and organization.

Following Stewart and Grobe (1979) described above, Grobe (1981) replicated the earlier findings using a different sample and a different kind of writing task. The earlier study had been based on an expository task, while the new study was based on a narrative task. Both holistic and analytic scorings were conducted, and the holistic scores were regressed on the analytic scores. As before, the total number of words written and the number of spelling errors were the two best predictors, by themselves yielding a multiple correlation of .67 in a sample of fifth graders. Ten additional syntactic maturity variables (including words per T-unit and the like) increased the multiple correlation to .77 (with no apparent correction for shrinkage). Similar results were obtained for grades 8 and 11.

The research conducted thus far into the characteristics of writing suggests that at least two questions remain unresolved. The first question has to do with what teachers should teach. Can Freedman's (1979) conclusion—that teachers value one set of criteria but teach another—be verified? Should instruction focus as much on content and organization as on sentence structure and mechanics? A second question relates to level of skill and cultural and linguistic concerns. That is, should teachers emphasize the same things with all students, regardless of level of skill, cultural group, and linguistic history? There are, of course, questions of measurement that arise in reading reports of previous research, but these questions are not the focus of the present study.

PROCEDURES

To answer questions that past research has not clearly resolved and to achieve other objectives stated, the ECT administration given in December of each year was viewed as an important primary source of information. Beyond the holistic scores and other information available for these students, however, additional data were needed concerning the specific characteristics of writing considered important among those who teach English composition.

The procedures followed were designed to obtain the needed information in the most practical and efficient manner possible. Planned statistical analyses set certain minimums on the numbers of cases and variables needed, and practicality and cost dictated the maximum. National samples of both students and English professors were considered desirable so that generalizations from the findings would be more defensible. Complete data for all cases was a high priority. Special attention was given to the development of a taxonomy of writing characteristics which would be comprehensive enough to cover the main areas of importance but brief enough to allow for economical data collection.

Sampling

The first task in the sampling design was to identify those examinees for whom complete data on critical variables was available. The critical variables were sex, birth year, ethnic group, and SAT-verbal, SAT-mathematical, SAT reading, SAT vocabulary, TSWE, ECT objective, ECT essay, and ECT reported scores. A total of 85,542 examinees had ECT objective and essay scores; but only 80,018 of these had ECT reported scores, only 73,366 cases were matched with SAT scores, and only 70,080 cases had ethnic and language identification data. Random samplings were made from each of four groups as follows:

1. Black (English best language), 205
2. Hispanics (English best language), 205
3. Hispanics (English not best language), 205
4. Whites (English best language), 205

After allowances for a few essays that could not be clearly reproduced and other data problems, the final counts in the samples were:

Group 1: Blacks, 202
Group 2: Hispanics (Y), 202
Group 3: Hispanics (N), 200
Group 4: Whites, 202

Preparation of Sampled Essays

Following sampling of the essays, they were prepared for a second reading by removing students' names, sexes, and non-essential identification numbers, printing two high-quality copies, and assembling reading packets containing 40 essays (nominally) each. The essays were randomly

Discourse Characteristics	Syntactic Characteristics	Lexical Characteristics
1. Statement of thesis	10. Pronoun usage	16. Level of diction
2. Overall organization	11. Subject-verb agreement	17. Range of vocabulary
3. Rhetorical strategy	12. Parallel structure	18. Precision of diction
4. Noteworthy ideas	13. Idiomatic usage	19. Figurative language
5. Supporting material	14. Punctuation	20. Spelling
6. Tone and attitude	15. Use of modifiers	
7. Paragraphing and transition		
8. Sentence variety		
9. Sentence logic		

Figure 1. The PWS Taxonomy

ordered in the packets for the initial reading session (planned for the morning of the day of the reading), and a second set of packets was assembled in reverse order for the second reading of the essays (planned for the afternoon). Each packet contained 10 essays (nominally) for each of the four groups sampled. (Slight variations in the numbers of essays in packets occurred because there were 806 essays distributed among 40 packets).

The Taxonomy

A listing of writing characteristics was first formulated by the Humanities staff in the Test Development section of the College Board division of Educational Testing Service. The staff, most of whom are former English teachers and all of whom have baccalaureate or advanced degrees in English, first conducted a review of nearly two dozen handbooks, rhetoric texts, grammar and composition textbooks, etc. Drawing on their past experience as teachers and supported by the review of the texts, the staff agreed that the resulting characteristics of writing generally encompassed all of the features that teachers of composition say they respond to when scoring or grading students' work.

The list of characteristics was then discussed in meetings with two consultants, revised, and sent to the consultants for review. These consultants were professors of English who had won recognition in the field of composition, both for their teaching and for their publications. The consultants recommended grouping the characteristics into "discourse," "syntactic," and "lexical" categories. It is inherent in the nature of language that any schematization of "characteristics" or classification of parts of speech carries with it some element of arbitrariness. This understood, those characteristics grouped as "discourse" are seen as features of the composition as a whole or of a prose piece at least as long as the conventional paragraph. "Syntactic" characteristics are those that attach to the sentence, clause or phrase; "lexical" characteristics are those of the word or word unit. The final listing of 20 characteristics, grouped in these three categories, is shown in Figure 1. A description of each of the 20 characteristics follows.

1. *Statement of thesis and purpose (explicit or implicit).* The author of any well-written composition has set out to say something of some value or importance. The thesis statement will appear most often in the opening paragraph and inform the reader what the point of the paper will be and may also indicate the writer's attitude toward the points he will make. It the thesis is not stated overtly, it can easily be inferred by the reader and understood as the assumption lying beneath the writer's opening remarks.

2. *Overall organization.* This term denotes the structure and coherence of the composition. In its most simple form, an essay that would rate well on overall organization has a clear introduction of the topic, a center section that develops and elaborates on the topic, and a forceful concluding paragraph that restates or emphasizes the points made about the topic in the body of the essay.

3. *Rhetorical strategy.* Composition handbooks discuss many different ways of developing the thesis of the essay. Among them are comparison and contrast, definition, analysis of process, and logical reasoning. These are sometimes called "strategies," which the writer adopts depending on his purpose in writing.

4. *Noteworthy ideas: originality of thought or insight.* This characteristic might be the most difficult to exemplify except by the experienced scorer of essay examinations or the veteran English teacher. Anecdotal evidence attests, however, to the existence of such traits in students and writers. Chances are probably 50-50 that 1 in 25 students, all given the same topic or problem, shows an approach to the problem or some insight into it that can be fairly described as unique compared with those of the other 24 students.

5. *Use of supporting materials: examples, etc.* It is not enough merely to offer a thesis or a hypothesis in the introduction of a composition. One of the functions of the center section of the conventional form of composition described above is to present evidence, facts, data, examples, concrete experience, etc., meant to confirm, support, deny, or contravene the thesis. The quality of the evidence or examples indicates to some degree the quality and breadth of the writer's experience with reading, with some intellectual discipline, or with the culture of the time.

6. *Writer's voice: tone and attitude.* The voice uttering the language on the printed page may or may not be that of the author of the piece. In literature, prose fiction, drama, poetry, the voice that the reader hears is most distinctly not that of the author but rather, as critics say, that of the "persona." The further one moves from straightforward expository prose or narrative journalism to imaginative literature, the more complex and problematic does the matter of voice or tone become. Simply stated, tone is the expression of the attitude of the author toward his subject and toward the audience he is addressing. The tone may be friendly and informal, authoritarian and superior, or any of a number of other possibilities. In reporting the results of research, for example, one tries to adopt as neutral and objective a tone as possible, whereas in political criticism a thoroughly scurrilous or nasty tone might be very effective, depending on the author's purpose and audience.

7. *Paragraphing and transition.* Conventional editing practice calls for the beginning of a new paragraph whenever a new idea or topic is introduced. For a brief essay with the simplest rhetorical structure, i.e., a beginning, a middle, and an end, three paragraphs could be appropriate. Among the possibilities for transitional links between both paragraphs and sentences of a composition are conjunctions and conjunctive adverbs such as "however," "therefore," "because," and "whenever." Smooth transition is further achieved by the repetition of key words and the use of relative pronouns such as "that" and "who." Skillful transition between sentences and paragraphs marks the work of the practiced writer and careful thinker and facilitates the work of the reader.

8. *Variety of sentence patterns.* The relatively unskilled writer lacks facility with sentence patterns. The four elementary patterns, each of which can have many variations, are simple, complex, compound, and compound-complex. These basic forms are essentially determined by the relationship among the ideas the writer is working with. Very skilled writers can "play" the language almost like a musical instrument; they can vary their forms and patterns to suit their tone, their audience, their purpose, and their taste. The serious writer tries hard to make the structure of sentences complement and enhance their meaning.

9. *Sentence logic.* "Sentence logic" describes a number of attributes that characterize a well-crafted sentence. For example, the referent (antecedent) of each relative pronoun will be clearly understood, whether it occurs in the same or an earlier sentence. When comparing things or ideas, precise logical distinctions are made. Redundancy does not occur unless consciously used for a particular effect. Precise diction assists the flow of thought between and within sentences: "since" is not indiscriminately substituted for "because," for example, or "meanwhile" for "after." Like ideas or elements are appropriately placed in parallel phrases or structures. Precise control over the dimensions of time and condition is evidenced by exact use of verb tenses, moods, and voices. Which ideas are selected for coordination and which for subordination reveals the degree of concentration and judgment of the writer. Without this concentration and judgment, some of the worst faults in logical thinking result.

10. *Pronoun usage: agreement with antecedent, case, etc.* Writers who are not fully conscious of the relation between the sentence structure and the appropriate pronoun or pronoun form make errors like the following (corrections are indicated in parentheses throughout):

- When the game was over and we had won, the coach gave he and I (him and me) the rest of the baseballs.
- The conductor led the orchestra through rehearsals of two of Beethoven's symphonies; even though there were many stops and starts, I really enjoyed it (them).

11. *Subject-verb agreement, verb forms, etc.* Unawareness of number and the demands that this concept places on the writer result in errors such as this:

- Just when calculators was (were) getting cheap enough so that everyone could buy one, a new brand made by the Japanese flooded the market.

12. *Parallel structure: clauses, series, etc.* The following simple example of faulty structure due to imperfectly paralleled elements illustrates well the dissonance that

results:

- Her ability to sing beautifully and to play well and her composing ability (and her ability to compose) accounted for her triumph in the competition.

13. *Idiomatic usage: prepositions, phrases, etc.* Inability to identify idiomatically correct prepositions and inexact understanding of idiomatic phrases create errors such as:

- The manager was angered at (angry about) the changes which (that) had been made without permission.
- People are so fed up with technology that they fly off the cuff (handle) at the least sign of trouble.

14. *Punctuation.* Errors in the elementary rules of punctuation can cause confusion and irritation as in these sentences:

- Men and women alike wish to exert minimal effort in today's society; (,) unlike the Depression era when people begged for any work, ( ) rather than accept welfare.
- Although fantasy and adventure appeal more to children (,) most people wish that they could spend more time away from the real world.

15. *Use of modifiers.* Careless use of adjectives and adverbs and ambiguous placement of modifying phrases result in errors such as:

- Things nowadays seem so hopelessly (hopeless) that we naturally turn to fantasy.
- Slipping out to sea, John waved his handkerchief to the ocean liner from the lighthouse. (From the lighthouse John waved his handkerchief to the ocean liner slipping out to sea.)

16. *Appropriate levels of diction.* The writer of considerable sophistication will recognize that words can be chosen for effect from among many different levels: colloquial, academic, confidential, technical, impressionistic, etc. Errors most typically include a conversational tone in a formal essay:

- The problem, if you see what I mean, is that people just ain't getting it together the way they used to.

17. *Range of vocabulary.* A writer who consistently uses a variety of words accurately is said to have a good range of vocabulary. An essay demonstrating poor range of vocabulary is limited by its reliance on cliché, jargon, or stereotypical thought often couched in stock phrases or words. The presence of such language suggests the writer does not fully understand what he is saying, has lost control of the ideas he is working with, or simply lacks the intellectual maturity needed to handle the subject:

- Educational goals can be made concrete and measureable by the consistent and meaningful application of educational objectives which in turn are the product of the professional process of peer dialogue among professionals such as teachers, guidance counselors, and curriculum specialists.
- (a positive example) Much as when the Northmen set sail to the unknown or when Columbus discovered the "New World," we have set sail to the abstruse reaches of our universe, macrocosm and microcosm alike.

18. *Precision of diction, conciseness of phrasing, redundancy.* The ability to write well includes the ability to use words to maximum effect, to use a few words to convey a great deal of meaning. Errors results in unnecessarily long or repetitive sentences:

- Adults should never underestimate the value of a child's point of view because a child has an important point of view and an adult should be aware that he does.
- Modern man is *decrepit* in his duty as a human being when he allows himself to become *impregnable* to the attractions of fantasy.

19. *Use of figurative language (metaphor, analogy, cliche).* Errors in the use of figurative language can range from the gratuitous use of trite concepts of mixed metaphors and strained analogies:

- Modern life can be compared to a can of cold spaghetti: both are not as good as they could be and both could benefit from some extra seasoning.
- The best response to this problem is to remind yourself that today is the first day of the rest of your life.

20. *Spelling.* The Perceptions of Writing Skill readers followed the conventions of standard written English.

The Essay Evaluation Form

Once the taxonomy was established, the next task was to design an instrument for collecting data on teachers' judgments of the essays with respect to each element of the taxonomy. A copy of the essay evaluation form used is included as Appendix C. The form identifies the reader by number, asks for a holistic score (on a scale from 1 to 4), and asks also for a check to indicate features of the essay perceived to be especially strong, strong, weak, or especially weak. In addition, a number indicating the order in which the essay was read was entered in the lower right-hand corner of the form.

The Special Reading

The special reading of the 806 sampled essays was held on September 27, 1980, at Educational Testing Service offices in Princeton. Twenty college English professors sampled

from national listings were invited to participate. Following the usual instructions on holistic reading and score assignments, two types of readings of each essay were conducted. In the first type, conducted in the morning session, readers were instructed to read an essay, assign a holistic score at the top of the essay evaluation form, and then to check the characteristics of the essay that were either strong or weak features. They were instructed not to change the holistic score after or during the process of judging the specific characteristics.

In the second type of reading, conducted in the afternoon, readers were asked not only to assign holistic scores and check important essay features but also to annotate essays to indicate precisely where in the essay something important was noted. A special list of symbols was used for this purpose. See Appendix C for instructions used.

Each reader read 40 essays (nominally) in the morning session and 40 essays (nominally) in the afternoon session. Thus, there were approximately 800 readings in the morning and 800 in the afternoon. Reader packets were arranged such that the second reader read essays in the opposite order from the first reading.

Variable Development

Following the special reading, the essay evaluation forms were coded, and other ratings were made by staff at ETS. In all, 40 variables were included in the technical analyses. The first 20 variables correspond to the 20 characteristics of the taxonomy (Figure 1), as defined in the previous section. Scores for these 20 variables were generated by coding each of the characteristics on a 1-5 (low to high) scale in the following manner:

\+ + = 5
\+ = 4
blank = 3
\- = 2
\- - = 1

Once so coded, the ratings of the two readers were summed to yield a score for each characteristic that could range from 2 to 10.

Variables 21 through 25 were staff ratings of easily observable "mechanical" characteristics of the essays:

21. *Essay length.* This variable was based on a count of the number of lines written.[1] For use in composite scores, this variable was arranged on a scale of 5 discrete lengths (5=long, 1=short).

22. *Paragraphs.* A count of the number of paragraphs in an essay, but truncated at 5 or more.

1. For a random sample of 40 essays out of the total sample of 806, the correlation between line count and word count was very high (r = .90). Therefore, a line count was considered as an appropriate measure of length.

23. *Spelling accuracy.* This variable was based on a count of the number of misspelled words in an essay. For some analyses, this variable was reversed in sign such that zero misspellings received a rating of 5, and 4 or more misspellings received a rating of 1.

24. *Handwriting.* The quality of the handwriting judged on a scale of 1 (poor) to 5 (excellent).

25. *Neatness.* The neatness of the essay rated on a scale from 1 (very sloppy) to 5 (very neat).

Variables 26 through 30 were composites of the above 25 characteristics.

26. *PWS discourse.* The sum of the combined readers' scores for the first 9 characteristics.

27. *PWS syntactic.* The sum of the combined readers' scores for characteristics 10 through 15.

28. *PWS lexical.* The sum of the combined readers' scores for characteristics 16 through 20.

29. *PWS mechanical.* The sum of the ratings for characteristics 21 through 25, after all had been placed on a 1-5 scale.

30. *PWS composite.* The sum of all ratings and readers' scores for all the first 20 characteristics.

31. *ECT holistic essay.* The sum of two readers' scores on a 1-4 scale, yielding a score on a 2-8 scale. These scores were obtained from the regular reading associated with the ECT administration in December 1979.

32. *PWS holistic essay.* The sum of two readers' scores on a 1-4 scale, yielding a score on a 2-8 scale. These scores were obtained from the special reading by the 20 English professors assembled at the Educational Testing Service in September 1980.

33. *Total holistic essay.* The sum of the ECT and PWS holistic essay scores, yielding a total score with a range from 4 to 16.

34. *SAT-verbal.* The total score of the verbal sections of the Scholastic Aptitude Test (range 200-800).

35. *Vocabulary.* The vocabulary score component of SAT-verbal (range 20-80).

36. *Reading.* The reading score component of SAT-verbal (range 20-80).

37. *SAT-mathematical.* The total score of the mathematical sections of the Scholastic Aptitude Test (range 200-800).

38. *TSWE.* The Test of Standard Written English score (range 20-60+).

39. *ECT reported.* The English Composition Test score. For December administration of the ECT, including the one analyzed here, the ECT reported score is a composite of the

multiple-choice test score and the essay test score (range 200–800).

40. *ECT raw objective.* This is the score on the multiple-choice portion of the ECT. The raw score used for this study has been neither equated nor scaled (range: -7 to 63, in the present sample).

Analyses

Analytical details are described in subsequent sections, but a brief overview of these methods is useful at this point. The principal methods employed were correlational, regression, and contingency table analysis, and analysis of variance. All 40 variables were intercorrelated for each of the groups sampled and for a special pooled and weighted sample. The pooled sample was necessary in order to make full use of all of the data, but weighting of the various samples was required because the sample representations were not the same as the population (those who took the ECT in December 1979) representations. The focus in the correlational analyses was on the relationship between the holistic judgments of essays and the other variables—especially the taxonomy characteristic scores.

Multiple regression analyses were conducted to determine what degree of accuracy was possible for the prediction of the ECT holistic score, using different sets of predictors to examine the independent contributions of variables. The ECT holistic score was selected as the most appropriate dependent variable because it had been obtained prior to and independently of the taxonomy characteristic scores and because a different group of readers assigned the ECT holistic scores. Predictors were examined in various sets, including taxonomy categories, mechanical scores, test scores, test scores combined with taxonomy categories, the entire taxonomy, and the entire taxonomy combined with the ECT objective score and the mechanical scores.

An analysis of variance was used to study differences between experienced and inexperienced readers in taxonomy characteristic perceptions. Contingency tables were used to investigate the relationship between objective test scores and essay writing performance for several groups.

DATA DESCRIPTION

Table 1 presents a comparison of the samples with the total population in terms of mean scores on key variables.

The 40 variables developed as discussed in the preceding section are divided, for purposes of description, into seven categories: discourse characteristics, syntactic characteristics, lexical characteristics, mechanical scores, composite scores, holistic scores, and test scores. Further details of the data are given in Appendix D.

Discourse Characteristics

Means, ranges, and standard deviations for the discourse characteristics of the essays sampled for this study are presented as the first nine variables of Table 2. The means and ranges are indicative of the tendencies of readers to perceive particular characteristics either positively or negatively. For example, statement of thesis was perceived most positively, as indicated by its high mean of 7.14, and

Table 1. Population and Sample Means for Selected Variables[a]

Variable	*Group*				
	Blacks	*Hispanics (Y)*	*Hispanics (N)*	*Whites*	*Total*
Population *N*[b]	2,731	1,111	270	59,624	85,542[c]
Sample *N*	202	202	200	202	
31.[d] ECT holistic score	4.55	4.71	3.95	5.18	5.08
	4.43	4.60	3.88	5.30	
34. SAT-verbal score	445.69	460.00	387.88	508.11	499.02
	448.96	454.50	382.25	507.03	
35. SAT-mathematical score	459.91	493.90	471.39	546.47	540.11
	452.38	490.59	465.25	548.02	
38. TSWE score	43.91	45.50	36.63	50.05	49.13
	43.61	45.45	35.76	50.37	
39. ECT reported score	457.04	469.29	407.51	521.81	516.32
	454.46	462.57	399.35	529.80	

a. Population figure above, sample figure below. See Appendix D for further details, including standard deviations and ranges.

b. Not exactly the same for all scores.

c. Not sum of group *N*'s because not all examinees complete all descriptive materials, and not all ethnic groups are included in this table.

d. Variable numbers here and in other tables correspond to numbered descriptions of variables presented in the text.

Table 2. Discourse, Syntactic, and Lexical Characteristic Variable Data Description[a]

Variable	Mean	Range	Standard Deviation
Discourse Characteristics			
1. Statement of thesis	7.14	2-10	1.51
2. Overall organization	6.32	2-10	1.73
3. Rhetorical strategy	6.00	2-10	1.55
4. Noteworthy ideas	6.17	2-10	1.81
5. Supporting materials	6.53	2-10	2.02
6. Tone and attitude	6.39	3-10	1.20
7. Paragraphing and transition	5.97	2-10	1.43
8. Sentence variety	6.16	2-10	1.20
9. Sentence logic	5.83	2-9	1.32
Syntactic Characteristics			
10. Pronoun usage	6.01	2-9	.89
11. Subject-verb agreement	6.06	2-9	.88
12. Parallel structure	6.16	2-10	.78
13. Idiomatic usage	5.92	2-9	.81
14. Punctuation	5.95	2-10	1.00
15. Use of modifiers	5.97	2-8	.46
Lexical Characteristics			
16. Level of diction	6.18	2-10	1.05
17. Range of vocabulary	6.06	2-10	1.17
18. Precision of diction	5.68	2-10	1.12
19. Figurative language	5.89	2-10	.85
20. Spelling	5.82	2-9	1.01

a. Based on all four groups sampled (806 cases) but adjusted for differences in sample and population representations.

sentence logic was perceived most negatively, as indicated by its low mean of 5.83. The standard deviation summarizes the variation in judgments. Judgments of use of supporting materials had the most variation; judgments of tone and attitude and of sentence variety had the least.

Syntactic Characteristics

Table 2 also includes a basic description of the syntactic characteristics data (variables 10 through 15). The most telling aspect of this set of variables is the standard deviation. All standard deviations for these six variables are less than the lowest standard deviation among the discourse characteristics. It is clear, then, that readers tended to view these characteristics with less variation than they did the discourse characteristics. The proximity of the means to the neutral value of 6.00 is suggestive of a relatively neutral perception of the syntactic characteristics in contrast to the discourse characteristics.

Lexical Characteristics

Variables 16 through 20 of Table 2, the lexical characteristics, follow a pattern similar to that of the syntactic characteristics except that there is slightly more variation, as indicated by the standard deviations and the ranges.

Table 3. Mechanical, Composite, Holistic and Test Score Data Description[a]

Variable	Mean	Range	Standard Deviation
Mechanical Scores			
21. Essay length	29.51	6-61	10.47
22. Paragraphs	2.96	1-5	1.24
23. Spelling errors	0.76	0-5	1.13
24. Handwriting	3.46	1-5	1.07
25. Neatness	3.24	1-5	1.02
Composite Scores			
26. PWS discourse	56.49	22-83	10.12
27. PWS syntactic	36.07	14-50	3.27
28. PWS lexical	29.62	15-45	3.67
29. PWS mechanical	16.84	7-24	3.17
30. PWS composite	122.19	60-169	14.87
Holistic Scores			
31. ECT holistic	5.25	2-8	1.30
32. PWS holistic	5.36	2-8	1.43
33. Total holistic	10.60	4-16	2.42
Test Scores			
34. SAT-verbal	503.10	200-750	97.18
35. Vocabulary	50.62	20-78	10.39
36. Reading	50.17	20-74	9.81
37. SAT-mathematical	542.57	200-790	101.91
38. TSWE	49.93	20-60+	8.58
39. ECT reported	524.85	220-780	100.52
40. ECT objective (raw)	30.79	-7-63	11.87

a. Based on all four groups sampled (806 cases) but adjusted for differences in sample and population representations.

Nevertheless, in general, judgments of lexical characteristics also had less variation than those of discourse characteristics. Judgments of range of vocabulary had the most variation, while figurative language had the least. Only one of the variables, spelling, failed to receive the full range of scores, but because spelling is not usually viewed as a positive feature of writing, it is not surprising that in no pair of readers did both score spelling as a double-plus for any essay.

Mechanical Scores

A basic description of the mechanical scores is given at the top of Table 3 as variables 21 through 25. Note that both paragraphs and spelling errors are truncated at five. More than five paragraphs or more than five spelling errors is represented as five. Essay length (number of lines written) ranged from 6 to 61 (the total number of lines provided on the front and back of the essay answer sheet).

Composite Scores

With the exception of PWS mechanical, composite scores were developed as simple additions of variable scores.

Two mechanical scores were transformed prior to creating a composite. Essay length was transformed to a 1-5 (short to long) scale by dividing the full range into equal increments. Spelling errors was reversed in sign to represent "spelling accuracy," as explained in the previous section. Note also that the PWS composite score is based only on discourse, syntactic, and lexical characteristics and consequently does not include the mechanical score.

Holistic Scores

Variables 31, 32, and 33 of Table 3 provide a basic description of the holistic scores developed. Note that the total holistic score is the sum of the ECT and PWS holistic scores. The means and variances for the ECT and PWS for both holistic scores are similar, but both are slightly greater for the PWS reading. This suggests that the PWS readers were more lenient and varied more in their judgments.

Test Scores

The means for the test scores, based on the four groups sampled suggest that, overall, the samples represent slightly more academic skill than has been represented in other samples. The SAT-verbal mean of 530 is somewhat above the national average of about 430. Note that variable 40, the ECT objective score is not a scaled but a raw score with negative values at the low end of the range. Moreover, it has not been equated, as have the other test scores. This is because the equating and scaling process is conducted for the ECT reported score only.

CORRELATIONAL ANALYSES

Appendix E contains detailed matrices of intercorrelations for all variables. This section will consider only selected relationships. Because the holistic judgments of writing skill made by the English professors constitute an important criterion—especially as they represent the combined judgments of readers—it is of primary interest to examine the relationships between these judgments and other variables. These relationships were examined for each of the seven classes of variables: discourse characteristics, syntactic characteristics, lexical characteristics, mechanical scores, composite scores, holistic scores, and test scores.

Table 4 shows correlations between the three holistic scores and the nine discourse characteristic variables. The first notable feature of these correlations is that the PWS holistic score correlates more closely with the nine discourse characteristics than does the ECT holistic score. This would be expected, because the PWS readers rendered both kinds of judgment. Moreover, it is likely that the PWS readers' judgments were influenced to some degree by the essay evaluation form—even though they made their holistic judgments first and their judgments about specific characteristics second. On the other hand, the ECT and the PWS readers constituted mutually exclusive groups; and the ECT readings were completed several months prior to the PWS readings (and before the PWS taxonomy was developed). Thus, the ECT and PWS holistic scores are quite independent, and the summation of the four separate reader judgments results in a reasonably reliable composite score.

Table 4 would suggest that, of the nine discourse characteristics, overall organization was perceived as the most important in essay writing of the type judged. Two additional characteristics—noteworthy ideas and supporting materials—were perceived as being the next most important.

Table 4. Correlations between Holistic Essay Scores and Characteristics of Discourse[a]

Characteristic	*ECT Holistic*	*PWS Holistic*	*Total Holistic*
1. Statement of thesis	.40	.72	.64
2. Overall organization	.52	.76	.73
3. Rhetorical strategy	.46	.70	.66
4. Noteworthy ideas	.48	.75	.70
5. Supporting materials	.47	.77	.71
6. Tone and attitude	.30	.54	.48
7. Paragraphing and transition	.42	.58	.57
8. Sentence variety	.34	.48	.47
9. Sentence logic	.39	.53	.52

a. Based on all four groups sampled (806 cases), but adjusted for differences in sample and population representations.

Table 5. Correlations between Holistic Essay Scores, and Syntactic, Lexical and Mechanical Characteristics[a]

Characteristic	*ECT Holistic*	*PWS Holistic*	*Total Holistic*
Syntactic			
10. Pronoun usage	.26	.45	.41
11. Subject-verb agreement	.19	.28	.26
12. Parallel structure	.31	.35	.37
13. Idiomatic usage	.19	.31	.29
14. Punctuation	.22	.29	.29
15. Use of modifiers	.12	.13	.14
Lexical			
16. Level of diction	.39	.55	.54
17. Range of vocabulary	.31	.53	.48
18. Precision of diction	.27	.43	.40
19. Figurative language	.14	.26	.23
20. Spelling	.29	.32	.34
Mechanical			
21. Essay length	.51	.50	.57
22. Paragraphs	.37	.28	.36
23. Spelling errors	−.23	−.23	−.26
24. Handwriting	.16	.06	.12
25. Neatness	.20	.08	.16

a. Based on all four groups sampled (806 cases), but adjusted for differences in sample and population representations.

Table 6. Correlations among Holistic Essay Scores, Composite Scores, and Test Scores[a]

Variable	ECT Holistic	PWS Holistic	Total Holistic
Composite Scores			
26. PWS discourse	.58	.90	.84
27. PWS syntactic	.33	.46	.45
28. PWS lexical	.41	.60	.58
29. PWS mechanical	.49	.37	.48
30. PWS composite	.57	.86	.81
Holistic Essay Scores			
31. ECT holistic	1.00	.58	.88[b]
32. PWS holistic	.58	1.00	.90[b]
33. Total holistic	.88[b]	.90[b]	1.00
Test Scores			
34. SAT-verbal	.56	.44	.56
35. Vocabulary	.52	.39	.51
36. Reading	.54	.45	.56
37. SAT-mathematical	.35	.17	.29
38. TSWE	.57	.38	.53
39. ECT reported	.79[b]	.54	.74[b]
40. ECT objective (raw)	.58	.45	.58

a. Based on all four groups sampled (806 cases), but adjusted for differences in sample and population representations.
b. Artificially inflated by part-whole confoundings.

Tone and attitude along with sentence variety were the least important of the discourse characteristics.

Table 5 suggests that, of the remaining 11 characteristics in the taxonomy, only level of diction and range of vocabulary have an importance of a magnitude equivalent to the first 9. Table 5 also indicates that essay length was of considerable importance, but that other mechanical characteristics were less important. Of the syntactic characteristics, only pronoun usage and parallel structure stand out as important correlates with the holistic judgments.

Table 6 demonstrates the substantial relationships among the holistic scores, composite scores, and test scores. Some of these correlations are spuriously high, however, because of either part-whole confoundings or possible halo effects. The high correlation (.90) between PWS discourse (the sum of the first nine characteristics) and PWS holistic probably reflects the fact that the same raters made both ratings at the same time. As noted in Table 6, several of the correlations have part-whole relationships.

Correlations with the ECT holistic score (first column), except for those footnoted, contain no obvious confoundings and are thus interpretable. That the PWS discourse composite has the same correlation (.58) with the ECT holistic score as does the PWS holistic score suggests that quick judgments of the nine discourse characteristics are comparable to a holistic judgment. Of course, the correlation between ECT holistic and PWS holistic represents an estimate of the reliability of each. It is an upper-bound estimate, however, because the same stimulus and response materials were judged in both instances—rather than parallel forms. Past research (e.g., Coffman 1966) would also suggest that the reliabilities of holistic scores of this type are lower than .58.

Thus, while some of the correlations in Table 6 are spuriously high, others are attenuated by the low reliabilities of the holistic scores. For example, correlations with test scores (with the exception of the ECT reported score) are somewhat attenuated. Assuming that the ECT holistic score has a reliability of .58, a correction for attenuation would increase the correlation with the ECT objective score from .58 to .76. Lower estimates of ECT holistic score reliability would attenuate the correlations even more. Correlations with the PWS characteristic scores (variables 1–20) are attenuated by the limited reliabilities of both the holistic scores *and* the characteristic scores. While the data of the present study do not allow for an accurate determination of the reliabilities of the characteristic scores, it is assumed that their reliabilities are very limited because they were not intended as rating scales but only as a rough indication of the relative importance of the elements of the taxonomy. Reliability estimates for PWS composite scores and for all those holistic scores, based on inter-rater error only, are given in Appendix F.

Summmary of Correlational Analyses

Correlations between holistic essay judgments and all other variables were examined for pooled and weighted samples. The most substantial correlations occurred between the discourse characteristics and the holistic judgments, a result that would be expected, given that the purpose of the essay in the ECT examination is to assess these higher-order skills. A substantial correlation was also observed, however, between the holistic judgments and the length of essays. It was presumed that the relationship with length was the result of associated relationships with the higher-order skills of discourse. All relationships with holistic scores were attenuated by the relatively low reliability of the holistic judgments. In addition, all relationships with PWS characteristic scores were further attenuated by the relatively low reliabilities of these scores.

MULTIPLE REGRESSION ANALYSES

The relationships just discussed in terms of simple correlations may be better understood when variables are analyzed simultaneously in multiple regression analyses because, although relationships may be observed, whether these are independent of other relationships is not clear from simple correlations. Multiple correlations allow for a determination of independent contributions to prediction. For these analyses, only the ECT holistic score is used because of its

Table 7. Multiple Prediction of ECT Holistic Score from PWS Scores[a]

Variables (in order entered, within set)	*r*	*R (cumulative)*	*b*	*β*
Discourse Characteristics				
2. Overall organization	.52	.52	.18	.24
4. Noteworthy ideas	.48	.57	.11	.16
9. Sentence logic	.39	.58	.12	.12
5. Supporting materials	.47	.59	.08	.13
7. Paragraphing and transition	.42	.59	.10	.11
Syntactic Characteristics				
12. Parallel structure	.31	.31	.39	.23
10. Pronoun usage	.26	.34	.23	.16
Lexical Characteristics				
16. Level of diction	.40	.40	.38	.30
20. Spelling	.29	.43	.22	.17
18. Precision of diction	.27	.44	.10	.09
Mechanical Scores				
21. Essay length	.51	.51	.05	.43
25. Neatness	.20	.54	.20	.16
23. Spelling errors	-.23	.57	-.20	-.18
22. Paragraphs	.37	.58	.12	.11

a. Based on all four groups sampled (806 cases) pooled, adjusted for differences in sample and population representations.

Table 8. Multiple Prediction of ECT Holistic Score from ECT Objective Score and PWS Scores[a]

Variables (in order entered, within set)	*r*	*R (cumulative)*	*b*	*β*
Adding Discourse Characteristics				
40. ECT objective (raw)	.58	.58	.04	.40
2. Overall organization	.52	.57	.14	.18
4. Noteworthy ideas	.48	.68	.09	.13
7. Paragraphing and transition	.42	.69	.09	.10
9. Sentence logic	.39	.69	.06	.07
5. Supporting material	.47	.69	.04	.06
Adding Syntactic Characteristics				
40. ECT objective (raw)	.58	.58	.06	.54
12. Parallel structure	.31	.60	.29	.17
Adding Lexical Characteristics				
40. ECT objective (raw)	.58	.58	.05	.49
16. Level of diction	.40	.61	.16	.13
20. Spelling	.29	.62	.17	.13
18. Precision of diction	.27	.63	.09	.07
Adding Mechanical Scores				
40. ECT objective (raw)	.58	.58	.05	.45
21. Essay length	.51	.69	.05	.38
25. Neatness	.20	.70	.18	.14
23. Spelling errors	-.23	.71	-.11	-.10

a. Based on all four groups sampled (N=806) pooled, but adjusted for differences in sample and population representations.

independence from the characteristic ratings. The ECT holistic score was obtained almost a year prior to the PWS evaluations of essay content. Consequently, to predict the ECT score from post hoc information on content will help explain which elements of content were important influences on the holistic judgment.

Predicting Holistic Scores from PWS Scores

We first examine the 20 characteristics of the PWS taxonomy and the five mechanical scores as predictors of the holistic judgments made of the ECT essays for the ECT administration in December 1979. Recall that the PWS characteristic scores resulted from a special reading by different readers in September 1980. In these analyses, variables were entered if they made a statistically significant ($p < .05$) contribution to prediction beyond previous variables already entered.

Table 7 gives the results of the multiple regression analysis for the pooled and weighted samples. The discourse characteristics were clearly superior to either syntactic or lexical characteristics in the prediction of the ECT holistic score. Such a result would be expected, of course, since it is the intent in the essay component of the ECT to offer an opportunity to exhibit these skills. Of particular interest, however, is that only five of the nine discourse characteristics were significant contributors to the prediction. Of the six syntactic characteristics, only two—parallel structure and pronoun usage—contributed significantly. And of the five lexical characteristics, only level of diction, precision of diction, and spelling contributed.

The mechanical scores, at the bottom of Table 7, also proved to be good predictors. With the exception of handwriting quality, all made significant contributions. Handwriting quality judgments were no doubt confounded with judgments of neatness; thus it would seem unlikely that both would contribute independently in an analysis of this type. Essay length, the count of lines written, was a particularly strong contributor in the prediction. But amount written is obviously confounded with various other attributes of quality. It would be difficult, for example, to provide supporting materials for an argument without adding length to an essay. Similarly, ideas that are indeed noteworthy require length for their development. The combination of four mechanical scores predicts about as well as does the combination of five discourse characteristics. However, the utility of the mechanical scores in diagnosis for instructional purposes is not clear.

Predicting Holistic Scores from ECT Objective and PWS Scores

The preceding analyses show that a limited set of the discourse characteristics, even when judged in a relatively crude manner, provide an estimate of holistic scores assigned at an earlier time by a different group of readers.

The syntactic and lexical characteristics were less effective as estimators. Finally, the mechanical scores, while estimators, seem of little utility in diagnosis. It is now of interest to ask whether the PWS scores add anything to the estimation of the holistic score possible from the ECT objective score. This question is of particular importance because the ECT reported score is a combination of the ECT objective score and the ECT holistic score.

Table 8 presents the results of regression analysis in predicting the ECT holistic score (assigned in December 1979) from the ECT objective score (obtained at the same time) and the PWS scores (obtained almost a year later). For the discourse characteristics, the results are similar to those of Table 7, in that the same five characteristics contribute, but the multiple correlation is now much higher (.69 vs. .59). These analyses show, therefore, that the ECT essay can contribute to measurement beyond the ECT objective score. They also indicate which specific essay characteristics are useful in contributing to the measurement.

When the syntactic characteristics are added to the ECT objective score in the prediction, pronoun usage no longer contributes as before (in Table 7, without the ECT objective score). This result would suggest that pronoun usage is effectively assessed by the ECT objective score. Parallel structure remains as a contributor, even though its relative contribution is small, as indicated by the small increase in the multiple correlation (from .58 to .60) and the relative beta weights for ECT objective and parallel structure (.54 vs. .17).

Adding the lexical characteristics increases the multiple correlations from .58 to .63, but the same three characteristics contribute as before, without the ECT objective score. Thus, the ECT objective score appears not to assess perfectly the kind of variation represented in level of diction, spelling, and precision of diction. But, with the exception of level of diction, the additional contribution of the lexical characteristics is not substantial.

The mechanical characteristics, especially essay length, again contribute importantly in the prediction of the ECT holistic score. The multiple correlation is increased from .58 to .69 by essay length alone and to .71 when neatness and spelling errors are added. As noted previously, however, some length in an essay is necessary to achieve an effective discourse.

Predicting Holistic Scores from All Significant Contributors

Having analyzed the contributions of the various PWS characteristics, the ECT objective score, and the mechanical scores within categories of predictor types, it is next of interest to examine contributors when predictors are combined across categories. In Table 9, three types of predictions are made. In the first, all PWS characteristics found to contribute significantly in the previous analyses were combined. Second, all PWS characteristics that contributed significantly beyond the ECT objective score were entered. And third, all significant contributors—including mechanical scores—were entered.

Table 9. Multiple Prediction of ECT Holistic Score[a] from Significant Contributors

Variables (in order entered, within set)	*r*	*R (cumulative)*	*b*	*β*
Using Significant PWS Characteristics				
2. Overall organization	.52	.52	.15	.20
4. Noteworthy ideas	.48	.57	.09	.12
20. Spelling	.29	.58	.13	.10
7. Paragraphing and transition	.42	.59	.10	.11
12. Parallel structure	.31	.60	.14	.08
5. Supporting material	.47	.61	.08	.12
9. Sentence logic	.39	.61	.07	.07
16. Level of diction	.40	.61	.08	.06
Using ECT Objective and Significant PWS Characteristics				
40. ECT objective score (raw)	.58	.58	.04	.39
2. Overall organization	.52	.67	.14	.18
4. Noteworthy ideas	.48	.68	.10	.14
20. Spelling	.29	.69	.12	.09
7. Paragraphing and transition	.42	.70	.09	.10
12. Parallel structure	.31	.70	.09	.06
9. Sentence logic	.39	.70	.04	.04
Using All Significant Contributors				
40. ECT objective score (raw)	.58	.58	.04	.37
21. Essay length (lines)	.51	.69	.04	.28
2. Overall organization	.52	.72	.09	.12
7. Paragraphing and transition	.42	.73	.09	.10
4. Noteworthy ideas	.48	.73	.05	.07
12. Parallel structure	.31	.74	.08	.05
20. Spelling	.29	.74	.10	.08
18. Precision of diction	.27	.74	.05	.05

a. Based on all four groups sampled (806 cases) but adjusted for differences in sample and population representations.

The analysis at the top of Table 9 shows the first prediction, using all previously significant PWS characteristics. Eight of the 20 PWS characteristics proved to contribute significantly to the prediction of the ECT holistic score. Interestingly, however, the multiple correlation of .61 attained is not substantially higher than that possible using discourse characteristics alone (.59; see Table 7). The most weight is still provided by overall organization, while the least is provided by level of diction (as indicated by the beta weights in the last column).

In the middle of Table 9 the second analysis, using the ECT objective score and significant PWS characteristics, is shown. The multiple correlation using all of these variables in .70, but this is no higher than that attained using only the discourse characteristics in addition to the ECT objective score (see Table 8). The last two variables to enter—parallel structure and sentence logic—do not increase the multiple correlation beyond a rounded .70, even though their contribution was statistically significant.

Table 10. Correlations between ECT Holistic Essay Score and PWS Characteristics for Four Groups

Variable	*Group*			
	Black (N=202)	*Hispanic (N) (N=200)*	*Hispanic (Y) (N=202)*	*White (N=202)*
Discourse Characteristics				
1. Statement of thesis	.42	.42	.44	.38
2. Overall organization	.40	.46	.42	.52
3. Rhetorical strategy	.35	.44	.44	.46
4. Noteworthy ideas	.38	.43	.42	.47
5. Supporting material	.33	.37	.47	.47
6. Tone and attitude	.25	.30	.25	.29
7. Paragraphing and transition	.26	.36	.34	.42
8. Sentence variety	.38	.43	.39	.33
9. Sentence logic	.30	.33	.33	.39
Syntactic Characteristics				
10. Pronoun usage	.23	.38	.21	.26
11. Subject-verb agreement	.36	.50	.21	.16
12. Parallel structure	.16	.35	.16	.31
13. Idiomatic usage	.25	.40	.21	.18
14. Punctuation	.26	.30	.18	.21
15. Use of modifiers	.11	.16	.26	.11
Lexical Characteristics				
16. Level of diction	.36	.44	.31	.39
17. Range of vocabulary	.33	.51	.20	.30
18. Precision of diction	.33	.38	.26	.26
19. Figurative language	.14	.36	.18	.13
20. Spelling	.19	.33	.17	.29

The last analysis, at the bottom of Table 9, shows that a multiple correlation of .74 was obtained when all significant contributors were entered in combination. This analysis would suggest that essay length contributes significantly to the prediction of the ECT holistic score over and beyond both the ECT objective score and the PWS characteristics. Some caution is necessary in making such an interpretation, however, because of the differing reliabilities of the variables entered in the analysis. The ECT objective score and essay length are both highly reliable measures, whereas the PWS judgments are not. As a result, it is logical that these two scores should predict best. Greater accuracy in the five PWS judgments which entered in these analyses would probably result in a suppression of the importance of essay length.

Summary of Multiple Regression Analyses

In the exploratory analyses of this section, the focus has been on the isolation of a limited set of writing characteristics that influence most significantly the judgments of brief, impromptu essays written by students applying to some of the best American colleges. The analyses show that, for this kind of writing and for these kinds of students, certain features of writing stand out as predictors of impressionistic judgments made earlier. Of course, the features that stand out are also influenced by the kind of question asked.

With these qualifications, the most important influences on impressionistic judgments appear to be (in order of importance): overall organization, noteworthy ideas, spelling, paragraphing and transition, parallel structure, and supporting materials. That is, these characteristics stand out among those students who took the ECT examination in December 1979. Students writing at different levels of skill would no doubt exhibit other important characteristics in their writing. The group comparisons which follow in a later section will suggest some of these kinds of differences. Cultural and linguistic factors also affect what is the most important influence for any given student.

Other analyses of this section considered the relative predictive power of the ECT objective score and certain mechanical features of essays (such as length) as related to the PWS characteristics. As emphasized, however, these analyses are more difficult to interpret because of extreme differences in the reliabilities of the various variables entered. They can only be suggestive of what kinds of judgmental information contribute most usefully to more objective information. As such, these other analyses broach a topic which is the focus of another research investigation now in progress and which is beyond the scope of the present study. Nevertheless, they are of interest as exploratory analyses.

GROUP COMPARISONS

As previously noted in the section describing procedures, essays for four groups were randomly sampled from the population of over 85,000 students who took the ECT examination in December 1979. Nominally, the samples consisted of 200 essays for each group, but 5 additional essays were randomly sampled for each group to allow for cases where data were not usable for one reason or another (for example, if the essay was difficult to reproduce). The final count of sampled cases available for anlysis was 202 blacks, 200 Hispanics who reported that English was *not* their best language, 202 Hispanics who reported that English *was* their best language, and 202 whites (non-Hispanic). The analyses reported in this section parallel those already reported for the pooled samples.

For a limited set of variables (but not, of course, for the PWS characteristics), group comparisons could be made for the total administration sample. These comparisons are also reported in this section.

Correlational Comparisons

Complete matrices of intercorrelation for all four groups and all variables given are given in Appendix E. The correlational comparisons presented here focus on the ECT holistic score and relationships with the other variables available for each group sampled.

Table 10 shows, for each of the four groups, the correlation between the ECT holistic score and the 20 PWS characteristics. These correlations in general follow the same pattern as before for the pooled samples. A few group differences are worth noting, however. A number of the PWS characteristics seem less related to the ECT holistic score for some groups. For the black sample, only two of the discourse characteristics (statement of thesis and sentence variety) have an observed correlation greater than that for any other group. The variance for the ECT holistic score is slightly less in the black sample. (See Appendix D for standard deviations and other data descriptions.) The standard deviation for the ECT holistic score in the black sample is only 1.22 as compared to 1.44, 1.29, and 1.29, respectively, in the other three groups (in the order presented in Table 10). Some of the largest correlations occur where both predictor and criterion variances are maximum. For examples, the Hispanic (N) sample has observed correlations of .50 and .51 for subject-verb agreement and range of vocabulary, respectively. In both cases, the Hispanic (N) group has the largest variance on both predictor and criterion variables.

Table 11 gives correlational comparisons for the four groups on the remaining variables. Again, a number of the observed correlations for the black sample appear to be systematically attenuated by the lower criterion variance and lower predictor variances for that group. For example, the PWS discourse composite has its lowest variance in the black sample and the lowest correlation. The observed correlations for the Hispanic (N) group, on the other hand, are higher for some variables—including the PWS lexical composite, the PWS composite, the PWS holistic score, SAT-verbal score, SAT-mathematical score, Vocabulary score, Reading score, TSWE score, and ECT objective score—than for any other group. Such an outcome must be attributed, in part, to the greater variance in the ECT holistic score for this group.

Multiple Regression Comparisons

In a manner similar to that used for the pooled samples previously, we may determine which of the PWS scores contribute significantly to the prediction of the ECT holistic score when entered in multiple sets. No attempt is made to repeat all of the previous analyses for each group, however.

Table 12 gives the results of multiple regression analyses for the black sample. Note that three of the discourse characteristics make a significant contribution ($p < .05$) to the prediction independently of other discourse characteristics. The multiple correlation of .52 attained with only three variables is about as high as the R of .50 attained using a simple sum of all nine (the PWS discourse composite) in Table 11. The specific variables differ from those of the pooled analyses, and the number of variables entering is less because of the reduced N. Neither the syntactic nor the lexical characteristics result in a multiple correlation higher than that possible using the discourse characteristics.

The same kind of multiple regression analysis for the Hispanic (N) sample is presented in Table 13. Again, observe that only three discourse characteristics predict as well (R=.56) as the simple sum of all nine (the discourse composite) in Table 11 (R=.56). Of particular interest in Table 13 is that the lexical characteristics seem to predict about as well (R=.57) as the discourse characteristics. Interestingly, only one of the mechanical characteristics (essay length) contributed, and the correlation was only .38.

Table 14 shows the results obtained when the ECT holistic score was regressed on the PWS characteristics for the Hispanic (Y) sample. Here, the discourse characteristics were clearly the best predictors. Table 15 presents the analysis for the white sample, where discourse and mechanical characteristics are the best predictors.

Other Sample Comparisons

It is of value to look beyond correlational relationships and regression analyses to gain a different perspective of the data. Table 16 shows a comparison of positive, neutral, and negative reader perceptions of writing characteristics for the four groups. There are some clear instructional implications when the data are viewed in this form. For the white sample, precision of diction had the highest

Table 11. Correlations between ECT Holistic Essay Score and PWS Mechanical Scores, PWS Composites, Holistic Scores, and Test Scores for Four Groups

Variable	Group			
	Black (N=202)	*Hispanic (N) (N=200)*	*Hispanic (Y) (N=202)*	*White (N=202)*
PWS Mechanical Scores				
21. Essay length	.42	.38	.41	.51
22. Paragraphs	.19	.19	.31	.38
23. Spelling errors	−.26	−.11	−.10	−.24
24. Handwriting	.05	.15	.07	.16
25. Neatness	.17	.11	.14	.20
PWS Composite Scores				
26. PWS discourse	.50	.56	.56	.57
27. PWS syntactic	.38	.50	.33	.31
28. PWS lexical	.40	.56	.34	.40
29. PWS mechanical	.37	.31	.37	.50
30. PWS composite	.49	.63	.56	.56
Holistic Essay Scores				
31. ECT holistic	1.00	1.00	1.00	1.00
32. PWS holistic	.59	.67	.63	.56
33. Total holistic	.88[a]	.91[a]	.89[a]	.87[a]
Test Scores				
34. SAT-verbal	.54	.62	.57	.54
35. Vocabulary	.51	.56	.52	.51
36. Reading	.52	.59	.55	.53
37. SAT-mathematical	.29	.27	.33	.33
38. TSWE	.51	.64	.55	.56
39. ECT reported	.76[a]	.85[a]	.77[a]	.79[a]
40. ECT objective (raw)	.49	.62	.50	.57

a. Artificially inflated by part-whole confounding.

proportion of negative perceptions (39 percent). For Hispanic (N)s, sentence logic was most often perceived negatively (67 percent). For blacks and Hispanic (Y)s, noteworthy ideas were most often perceived negatively (57 and 56 percent, respectively). If one lists the five characteristics for each group perceived most negatively (Table 17), the contrast is instructive. Observe that noteworthy ideas appears in the top five for all groups, but that sentence logic appears in the top five for only the Hispanic (N) group, and furthermore that it is the most negatively perceived characteristic for that group. Thus, it could be argued that instructional emphases should differ for different groups.

In addition to other comparative analyses of groups, an exploratory effort was made to determine possible linguistic factors operating in the black and Hispanic (Y) groups. The Hispanic (N) group did, of course, have linguistic patterns, but the interest in the former groups concerned more subtle issues. For this exploratory study, random samples of 30 essays each from the black and the Hispanic (Y) samples were sent respectively to black and Hispanic linguistic consultants. These samples included the annotations made by the PWS readers. Each set of 30 essays was stratified by holistic score level into groups of 10 above-average, 10 average, and 10 below-average essays.

Table 12. Multiple Prediction of ECT Holistic Score from PWS Characteristics for Black Sample (*N*=202)

Variables (in order enetered, within set)	*r*	*R (cumulative)*	*b*	*β*
Discourse Characteristics				
1. Statement of thesis	.42	.42	.18	.24
8. Sentence variety	.38	.49	.25	.24
4. Noteworthy ideas	.38	.52	.14	.19
Syntactic Characteristics				
11. Subject-verb agreement	.36	.36	.38	.31
14. Punctuation	.26	.39	.20	.16
Lexical Characteristics				
16. Level of diction	.36	.36	.32	.27
18. Precision of diction	.33	.41	.20	.21
Mechanical Characteristics				
21. Essay length	.42	.42	.06	.42
23. Spelling errors	−.26	.49	−.22	−.22
25. Neatness	.17	.51	.17	.14

In the black sample, the consultant observed that, at all three score levels, the most noticeable amount of attention given to the essays by the readers was with respect to the discourse characteristics (the same conclusion one reaches from the data analyses). Similarly, in the Hispanic (Y) sample, the consultant noted that organization and idea development seemed to be primary considerations in reader evaluations. However, the Hispanic consultant also observed tendencies that were not noted by the PWS readers:

a. Talking directly to the reader, which may reflect a lack of familiarity with appropriate styles for writing.
b. Mixing of formal and colloquial levels of language, which may reflect incomplete mastery of English.
c. Using articles which reflect Spanish patterns ("...life needs both the practical and *the* fantasy ...").
d. Using sentences that are too long and too complex, perhaps a reflection of inadequate language control.
e. Using constructions which appear to be essentially Spanish in form ("As they started to develop they found reasons for why ....").
f. Using the singular as in Spanish.

Therefore, despite the students' self-report that English was their best language, many cases in the Hispanic (Y) sample manifested vestiges of the Spanish language. Although the discourse characteristics were the primary considerations influencing reader scores, undoubtedly these linguistic features affected scoring also. Similar influences probably operated in the black sample, but their occurrence was rare in the sample of this study. Given the small samples analyzed and the limited resources applied, the linguistic analyses reported here must be viewed as only exploratory.

Table 13. Multiple Prediction of ECT Holistic Essay Score from PWS Characteristics for Hispanic (N) Sample (*N*=200)

Variables (in order of entry, within set)	*r*	*R (cumulative)*	*b*	*β*
Discourse Characteristics				
2. Overall organization	.46	.46	.18	.20
8. Sentence variety	.43	.53	.29	.29
1. Statement of thesis	.42	.56	.18	.22
Syntactic Characteristics				
11. Subject-verb agreement	.50	.50	.40	.42
12. Parallel structure	.35	.52	.31	.19
Lexical Characteristics				
17. Range of vocabulary	.51	.51	.38	.36
20. Spelling	.33	.55	.22	.18
16. Level of diction	.44	.57	.20	.17
Mechanical Characteristics				
21. Essay length	.38	.38	.06	.38

Table 14. Multiple Prediction of ECT Holistic Score from PWS Characteristics for Hispanic (Y) Sample (*N*=202)

Variables (in order entered, within set)	*r*	*R (cumulative)*	*b*	*β*
Discourse Characteristics				
5. Supporting materials	.47	.47	.19	.30
8. Sentence variety	.39	.54	.25	.22
1. Statement of thesis	.44	.56	.16	.20
Syntactic Characteristics				
15. Use of modifiers	.26	.26	.90	.24
11. Subject-verb agreement	.21	.34	.30	.19
13. Idiomatic usage	.21	.36	.22	.14
Lexical Characteristics				
16. Level of diction	.31	.31	.32	.24
18. Precision of diction	.26	.34	.19	.16
Mechanical Characteristics				
21. Essay length	.41	.41	.05	.39
23. Spelling errors	−.10	.46	−.25	−.22
22. Paragraphs	.31	.48	.16	.16

Total Population Comparisons

For a limited set of variables available for all persons who took the December 1979 ECT examination, it was possible to conduct group comparisons. Table 18 shows correlational comparisons for men, women, blacks, Hispanics, and whites, along with the corresponding frequencies used for the computations. With the exception of the Hispanic group, the differences in correlations across groups are not of great interest. The correlations for Hispanics tend to be higher than those for the other groups, probably because of the greater variance on all variables for this group. (See

Table 15. Multiple Prediction of ECT Holistic Score from PWS Characteristics for White Sample (*N*=202)

Variables (in order enetered, within set)	*r*	*R (cumulative)*	*b*	*β*
Discourse Characteristics				
2. Overall organization	.52	.52	.24	.32
4. Noteworthy ideas	.47	.56	.17	.24
9. Sentence logic	.39	.58	.14	.15
Syntactic Characteristics				
12. Parallel structure	.31	.31	.39	.24
10. Pronoun usage	.26	.33	.22	.15
Lexical Characteristics				
16. Level of diction	.39	.39	.41	.33
20. Spelling	.29	.43	.24	.19
Mechanical Characteristics				
21. Essay length	.51	.51	.06	.48
25. Neatness	.20	.54	.23	.18
23. Spelling errors	−.24	.57	−.20	−.18

Table 16. Group Comparisons with Respect to Positive, Neutral, and Negative Perceptions of Specific Characteristics[a]

Characteristic	Black			Hispanic (Y)			Hispanic (N)			White		
	Positive	*Neutral*	*Negative*	*Positive*	*Neutral*	*Negative*	*Positive*	*Neutral*	*Negative*	*Positive*	*Neutral*	*Negative*
1. Statement of thesis	48	24	29	51	24	25	34	21	45	68	22	10
2. Overall organization	30	19	50	24	26	50	18	21	61	47	24	29
3. Rhetorical strategy	21	33	46	22	27	51	14	26	60	37	27	37
4. Noteworthy ideas	22	20	57	31	12	56	22	16	61	46	21	33
5. Supporting materials	32	17	51	29	16	54	25	16	59	55	13	32
6. Tone and attitude	25	46	29	25	50	25	22	47	30	42	39	20
7. Paragraphing, transition	23	31	46	17	35	48	14	26	60	35	31	34
8. Sentence variety	22	50	28	29	51	20	13	41	46	31	46	23
9. Sentence logic	18	38	44	16	48	36	9	23	67	24	45	31
10. Pronoun usage	15	60	24	19	62	19	10	48	41	19	61	19
11. Subject-verb agreement	18	58	24	20	64	16	8	42	50	19	66	15
12. Parallel structure	9	83	8	11	79	10	5	72	22	19	73	8
13. Idiomatic usage	13	64	23	10	63	27	6	44	50	14	66	19
14. Punctuation	17	44	39	14	58	27	6	44	50	21	54	25
15. Use of modifiers	3	90	7	3	93	4	4	86	10	5	89	6
16. Level of diction	24	46	30	26	47	27	15	43	42	33	46	22
17. Range of vocabulary	17	46	38	14	55	30	13	38	49	28	47	25
18. Precision of diction	12	41	47	10	50	39	5	32	63	16	45	39
19. Figurative language	8	69	23	8	70	21	8	64	28	11	69	20
20. Spelling	11	61	28	13	61	26	9	49	42	12	67	21

a. Figures are percentages of essays within each group perceived positively, neutrally, or negatively with respect to each of the characteristics listed.

Appendix D for population data description, including variances.) The same kind of observation was made recently by Breland and Griswold (1981) in a California sample using a different essay criterion. The slightly attenuated correlations for the PWS black sample, presented earlier, did not occur in the total population, as Table 18 demonstrates. This difference is explainable by the fact that the ECT holistic score variance in the total population of ECT examinees was not attenuated for blacks.

Another possible comparison, using the total population, is that within specific ranges of score levels. In fact, such comparisons are difficult to make without large numbers of cases. Comparisons within score levels are important because correlation coefficients may mask possible group differences at certain score levels. Table 19 presents a comparison of ECT essay writing performance at different levels of SAT-verbal scores. Note the sex contrasts in particular. For three of the four SAT-verbal score levels, women wrote more superior essays than expected, and men wrote fewer. But note that the correlations of Table 18 did not reveal this kind of group difference. Table 19 also shows that blacks and Hispanics at three of the four SAT-verbal score levels wrote fewer superior essays than expected. Table 20 presents a similar analysis for the TSWE, and the results are similar.

Summary of Group Comparisons

The groups sampled were compared in a number of different ways. Correlational relationships among the variables were examined and a few small differences across groups were noted. It was not clear from the sample comparisons whether differences were due to attenuations resulting from variable range restrictions or from real group differences. Correlational analyses using the total population data, however, showed that substantial differences in correlations did not occur in total population data. The multiple regression analyses suggested that the influences of specific elements on holistic scores of essays vary across groups. When the groups were compared also with respect to the frequency with which characteristics were perceived positively or negatively, a slightly different picture of relative importance resulted. This difference undoubtedly occurred because frequently observed features of writing do not necessarily have a great influence on holistic judgments. What was suggested was that the combination of frequency and influence is important for instructional purposes. When both frequency and influence are considered, overall organization and noteworthy ideas stand out as important instructional elements for all groups. At a secondary level of importance were statement of thesis and supporting materials.

The groups were compared also with respect to the predictive accuracy of multiple-choice measures. The proportions of students writing superior essays were examined at several multiple-choice score levels. These analyses were conducted for the total ECT administration sample and included men and women as additional groups. The analyses showed that women consistently wrote more superior essays than would be predicted by the multiple-choice measures and that men and minority groups wrote fewer superior essays than would be predicted.

Table 17. Five Most Negatively Perceived Characteristics for Four Groups

Characteristic	*Percentage of Negative Perceptions*
Black Sample	
4. Noteworthy ideas	57
5. Supporting material	51
2. Overall organization	50
18. Precision of diction	47
7. Paragraphing, transition	46
Hispanic (N) Sample	
9. Sentence logic	67
18. Precision of diction	63
2. Overall organization	61
4. Noteworthy ideas	61
3. Rhetorical strategy	60
Hispanic (Y) Sample	
4. Noteworthy ideas	56
5. Supporting material	54
3. Rhetorical strategy	51
2. Overall organization	50
7. Paragraphing, transition	48
White Sample	
18. Precision of diction	39
3. Rhetorical strategy	37
7. Paragraphing, transition	34
4. Noteworthy ideas	33
5. Supporting material	32

OTHER COMPARISONS

In addition to the analyses reported in the preceding sections, several other comparisons were made during the course of the investigation, as specific issues of interest arose. These analyses were not intended as formal aspects of the project, however, but serve only to indicate how some potentially important questions may be answered. One issue that appears to be of almost certain importance has to do with *levels* of skill. If instruction is to be effective and if educational programs are to be accurately gauged for their effectiveness, levels of skill need to be identified so that instructional emphases and program evaluations can be related to them. A second issue that came up was whether experienced readers were different in their perceptions than relatively inexperienced readers. Finally, there was a question of whether readers would say one thing (about what is important to them) and do another (when actually grading

Table 18. Total December 1979 ECT Population Frequencies and Correlations between Available Variables and ECT Essay Score by Group

Variable	Group					
	Total[a]	Men	Women	Black	Hispanic	White
	Frequencies					
34. SAT-verbal	73,366	35,367	37,977	2,463	1,237	56,310
35. Vocabulary	73,364	35,366	37,976	2,463	1,237	56,309
36. Reading	73,360	35,364	37,974	2,463	1,237	56,308
37. SAT-mathematical	73,370	35,374	37,974	2,462	1,237	56,310
38. TSWE	73,366	35,367	37,977	2,463	1,237	56,308
39. ECT reported	80,018	38,515	41,478	2,680	1,346	59,259
40. ECT objective (raw)	85,542	41,314	44,201	2,791	1,392	60,587
	Correlations with ECT Essay Score					
34. SAT-verbal	.51	.53	.51	.51	.58	.48
35. Vocabulary	.49	.50	.48	.48	.55	.45
36. Reading	.48	.50	.48	.48	.54	.45
37. SAT-mathematical	.28	.32	.32	.30	.34	.27
38. TSWE	.49	.50	.48	.50	.58	.45
39. ECT reported[b]	.76	.77	.74	.76	.79	.74
40. ECT objective (raw)	.51	.52	.49	.50	.54	.48

a. Total is not the sum of sex or ethnic groups because group identification was not available for all cases. Moreover, some groups are not included in this table.

b. Note that this score includes the ECT essay score, and thus correlations with it are artificially inflated.

Table 19. Essay Writing Performance by Group and SAT-Verbal Score Level

SAT-V Score Range	Group					
	Total	Men	Women	Black	Hispanic	White
	Frequencies Scoring in Four SAT-V Score Ranges					
500+	37,716	18,714	18,990	786	398	30,541
400-499	24,659	11,650	13,004	896	427	18,898
300-399	9,457	4,319	5,135	617	305	6,269
below 300	1,534	684	848	164	107	602
	Percentages Writing Superior[a] Essays					
500+	55.9	51.2*	60.5*	42.9*	47.7*	56.4
400-499	26.9	21.4*	31.9*	21.9*	20.6*	27.8
300-399	10.9	7.3*	13.9*	8.3*	7.2*	12.3*
below 300	2.4	1.8	2.9	1.2	1.9	4.0

a. A "superior" essay was defined as one receiving an ECT holistic score of 6 or above.

*Statistically significant ($p < .05$) from expected percentages. Direction of effect is determined by comparing percentage with that in "Total" column.

Table 20. Essay Writing Performance by Group and TSWE Score Level

TSWE Score Range	Group					
	Total	Men	Women	Black	Hispanic	White
	Frequencies Scoring in Four TSWE Score Ranges					
50+	40,692	18,536	22,145	811	412	33,143
40-49	21,905	11,066	10,834	855	419	16,474
30-39	8,578	4,560	4,014	573	259	5,709
below 30	2,191	1,205	984	224	147	982
	Percentages Writing Superior[a] Essays					
50+	54.0	50.6*	56.9*	42.9*	47.3*	54.5
40-49	26.3	23.3*	29.4*	20.4*	20.0*	27.1
30-39	11.2	9.1*	13.5*	10.3	7.7*	12.2
below 30	3.4	3.4	3.4	2.2	2.0	4.5

a. A "superior" essay was defined as one receiving an ECT holistic score of 6 or above.

*Significantly different ($p < .05$) from expected percentage.

essays). Brief analyses of these considerations are described in the following pages of this section.

Score Level Comparisons

Since each of the four readers assigned a holistic score in the range of 1 (low) to 4 (high), each essay received a total score in the range of 4 to 16. Each of these 13 score levels was examined with respect to the percentages of essays at each level having positive, negative, or neutral characteristic scores. Recall that each characteristic was coded on a 1-to-5 scale for each reader: a score of 5 was assigned when a reader checked "+ +", 4 for "+", 3 for no check, 2 for "-", and 1 for "- -". Thus, when both readers' scores were summed, a characteristic score in the range of 2 (low) to 10 (high) resulted. For the purposes of the analyses in this section, these summed scores were classified into three groups: positive (7-10), neutral (6), and negative (2-5). The per-

centages of essays with positively and negatively perceived characteristics was then examined for each of the 13 holistic score levels.

Table 21 summarizes the results of these score level comparisons. Only 6 of the 806 essays were assigned the maximum holistic score by all four readers, thus receiving a total score of 16. None of these six was perceived negatively on any of the 20 characteristics. All were perceived positively on these characteristics:

1. Statement of thesis
2. Overall organization
3. Rhetorical strategy
4. Noteworthy ideas
5. Supporting material
16. Level of diction

Twelve of the 806 essays received total scores of 15. These were, of course, quite similar to the previous level, since only one of the four readers failed to assign them the maximum holistic score of four. At this level all were perceived positively on these characteristics:

1. Statement of thesis
2. Overall organization
3. Supporting material
7. Paragraphing and transition

For three characteristics two essays were perceived negatively, and for five other characteristics one was perceived negatively.

When one moves to the next score level, 14, there is a distinct change in pattern. There is no characteristic for which all 27 essays at this level were perceived positively, even though 26 of the 27 were perceived positively on statement of thesis, and 25 of the 27 were perceived positively on use of supporting materials. What is most distinctive about this group of essays is the absence of negative perceptions for eight characteristics: statement of thesis, rhetorical strategy, use of supporting materials, tone and attitude, pronoun usage, subject-verb agreement, idiomatic usage, use of modifiers, and vocabulary.

At level 13, there were 44 essays, none of which was perceived negatively on either noteworthy ideas or level of diction. All but one of these contained a statement of thesis. Level 12 was represented by 71 essays, and it was distinguished by having more positive than negative perceptions on all 20 characteristics. Levels 10 and 11, overall, were about equal in positive and negative perceptions, but specific characteristics differ. Levels 9 and below were decidedly more negative than positive. Less than half of these were perceived positively on statement of thesis and less than 16 percent on overall organization.

At the lowest levels, the patterns are less distinct than they were for the highest levels. No characteristic was perceived as either positive or negative for all of the essays at any score level. However, at level 4, 93 percent were perceived negatively on overall organization. But, interestingly, only 11 percent were perceived negatively on use of modifiers and only 29 percent were perceived negatively on parallel structure. This suggests that some characteristics are perceived neutrally except for distinctions at the highest levels. More detail of this type is observable from plots of positive, neutral, and negative perceptions as a function of score level (see Appendix G).

Experienced/Inexperienced Comparisons

Table 22 shows the results of analyses of variance comparing experienced and inexperienced readers on both the morning reading (Reading I) and the afternoon reading (Reading II). Recall that Reading I was conducted by assigning a holistic score and then completing the application form. Reading II was conducted by assigning a holistic score, completing the evaluation form, and annotating the essay. Each reader's packet for each reading contained 40 essays, 10 for each of the 4 groups sampled; and the order in which essays were read for Reading II was the reverse of that for Reading I. Thus, systematic differences that might bias the quality of the essays read by experienced and inexperienced readers was controlled, and score differences attributable to systematic differences in order of reading were controlled. Table 22 indicates that inexperienced readers tended to assign slightly higher holistic scores than experienced readers. However, only the differences for Reading II were statistically significant. Greater differences were observed in what readers perceived to be important features of essays. The inexperienced readers tended to perceive characteristics 1, 2, 3, and 4 (statement of thesis, overall organization, rhetorical strategy and paragraphing) more positively than did experienced readers. Other differences were not consistent across readings and thus are probably not important differences.

Reader Questionnaire Results

Prior to coming to ETS to participate in the reading of essays for the project, each of the 20 readers was sent a questionnaire (Appendix H). Part I of the questionnaire was open-ended and was intended to elicit responses indicating what were perceived to be the most important characteristics of brief, expository writing. The first question of Part I, asking for the one most important characteristic, yielded about 12 distinctly different responses. By far the most consistent response was "clear expression" or a similar phrase. The second question of Part I yielded about 17 different responses. The most frequent responses related to logic, organization, or clarity. Use of supporting material, precision, and clear sentence structure were other frequent responses.

Part II of the questionnaire was similar to the essay evaluation form used for the reading except that it did not include sentence logic (characteristic 9) or use of modifiers

Table 21. Positive and Negative Perceptions of Essay Characteristics for Thirteen Score Levels[a]

Characteristic	Score:	16		15		14		13		12		11		10		9		8		7		6		5		4	
	N:	6		12		27		44		71		92		110		116		103		88		47		45		45	
	Perceptions:	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−	+	−
1. Statement of thesis		100	0	100	0	96	0	98	2	83	3	72	9	64	15	47	21	33	31	23	47	21	53	9	73	0	84
2. Overall organization		100	0	100	0	85	4	80	11	65	10	47	24	34	33	16	50	9	68	6	75	4	85	4	82	2	93
3. Rhetorical strategy		100	0	92	0	74	0	59	7	54	13	37	37	27	34	10	60	7	73	4	72	2	66	0	76	0	80
4. Noteworthy ideas		100	0	75	17	82	4	89	0	63	20	51	29	29	43	18	58	11	77	10	70	2	89	2	84	7	87
5. Supporting material		100	0	100	0	93	4	82	11	75	10	50	26	37	39	28	59	11	74	14	69	11	72	7	84	2	87
6. Tone and attitude		67	0	67	8	78	0	54	4	56	7	45	23	28	21	22	33	18	28	11	36	4	40	9	40	4	47
7 Paragraphs, transition		83	0	100	0	63	4	48	16	46	25	30	28	24	42	17	60	7	60	7	64	0	70	7	60	0	78
8. Sentence variety		50	0	83	8	78	4	64	4	46	10	32	17	27	27	18	28	10	32	6	47	2	49	0	44	0	67
9. Sentence logic		50	0	75	0	59	4	39	9	25	17	23	33	20	36	12	51	11	52	4	64	0	70	2	69	0	87
10. Pronoun usage		33	0	50	0	30	0	34	4	37	10	20	16	17	24	15	23	10	27	6	41	2	38	4	44	0	64
11. Subject-verb agreement		17	0	50	8	30	0	27	14	27	7	22	13	22	14	14	19	14	31	8	39	2	38	2	62	2	80
12. Parallel structure		67	0	58	0	44	4	20	2	22	3	11	11	11	16	10	11	6	13	0	11	2	17	0	20	0	29
13. Idiomatic usage		50	0	33	0	18	0	20	11	27	10	12	24	14	26	10	27	6	32	2	39	2	49	0	56	0	67
14. Punctuation		50	0	67	0	33	11	32	25	25	18	14	39	22	28	15	35	4	44	6	35	2	53	4	38	2	69
15. Use of modifiers		17	0	8	0	15	0	9	2	4	0	5	4	3	6	3	10	3	11	2	6	2	11	0	13	0	11
16. Level of diction		100	0	67	8	74	4	61	0	51	8	36	22	27	20	19	33	10	32	6	52	2	47	0	49	0	69
17. Range of vocabulary		83	0	75	17	48	0	50	7	32	13	24	26	22	33	13	40	2	48	9	47	2	51	0	44	0	73
18. Precision of diction		50	0	50	8	30	4	27	23	30	21	15	44	11	46	8	51	2	57	1	56	0	70	0	60	0	78
19. Figurative language		17	0	42	17	18	7	18	7	22	7	10	23	12	27	5	27	1	29	3	27	2	17	4	18	0	53
20. Spelling		33	0	50	0	15	7	14	14	22	11	11	26	10	26	14	30	10	31	4	36	4	34	4	47	4	62
Total		1267	0	1342	91	1063	61	925	173	812	223	567	474	461	556	314	726	185	850	132	933	68	1019	58	1063	23	1365
Average		63	0	67	5	53	3	46	9	41	11	28	24	23	28	16	36	9	43	7	47	3	51	3	53	1	68
Average Difference		63		62		50		37		30		4		−5		−20		−34		−40		−48		−50		−67	

a. Entries in this table are percentages of essays with the indicated scores which were perceived positively or negatively.

Table 22. Mean Holistic Scores and Characteristic Ratings by Experienced/Inexperienced Readers

	Reading I			Reading II		
	N=400 Inex.	N=400 Exp.	F	N=400 Inex.	N=400 Exp.	F
Holistic Score	2.31	2.26	< 1	2.37	2.20	7.22*
1. Statement of thesis	3.32	3.17	4.12*	3.35	3.13	8.55*
2. Overall organization	3.05	2.72	18.5*	2.92	2.57	20.54*
3. Rhetorical strategy	2.88	2.66	11.82*	2.85	2.56	16.96*
4. Noteworthy ideas	2.83	2.74	1.4	2.93	2.54	23.12*
5. Supporting materials	2.94	2.92	< 1	2.99	2.59	22.01*
6. Tone and attitude	3.04	3.01	< 1	3.09	2.94	7.85*
7. Paragraphing, transition	2.83	2.68	6.29*	2.83	2.63	8.60*
8. Sentence variety	2.95	2.86	2.68	3.08	2.86	14.22*
9. Sentence logic	2.76	2.67	2.49	2.78	2.61	7.06*
10. Pronoun usage	2.86	3.01	8.82*	2.87	2.78	3.69
11. Subject-verb agreement	2.79	2.97	12.1*	2.84	2.84	0
12. Parallel structure	2.97	2.97	0	3.01	2.99	< 1
13. Idiomatic usage	2.84	2.85	< 1	2.82	2.72	4.30*
14. Punctuation	2.78	2.95	11.58*	2.83	2.77	1.58
15. Use of modifiers	2.94	2.96	< 1	2.99	2.99	0
16. Level of diction	2.91	2.95	< 1	2.97	2.93	< 1
17. Range of vocabulary	2.80	2.83	< 1	2.94	2.84	3.74
18. Precision of diction	2.76	2.69	1.58	2.62	2.55	1.16
19. Figurative language	2.89	2.86	< 1	2.94	2.92	< 1
20. Spelling	2.73	2.90	10.45*	2.82	2.86	< 1

*$p < .05$.

Table 23. Reader Questionnaire Results (Frequencies)

	Perceived Influence					
Characteristic	Very Heavy (4)	Heavy (3)	Some (2)	None (1)	Mean	Rank
1. Statement of thesis	13	4	2	1	3.45	2
2. Overall organization	10	9	2	0	3.55	1
3. Rhetorical strategy	3	11	5	0	2.75	10
4. Noteworthy ideas	7	10	3	0	3.20	4
5. Supporting material	11	6	2	0	3.30	3
6. Tone and attitude	1	12	7	0	2.70	11
7. Pararaphing, transition	3	12	5	0	2.90	6
8. Sentence variety	2	10	9	0	2.80	7
9. Sentence logic*						
10. Pronoun usage	3	8	8	0	2.65	13
11. Subject-verb agreement	4	12	3	1	2.95	5
12. Parallel structure	0	13	6	1	2.60	14
13. Idiomatic usage	2	6	12	0	2.50	17
14. Punctuation	0	12	8	0	2.60	15
15. Use of modifiers*						
16. Level of diction	2	12	6	0	2.80	8
17. Range of vocabulary	4	9	6	1	2.80	9
18. Precision of diction	4	10	4	0	2.70	12
19. Figurative language	2	4	15	1	2.55	16
20. Spelling	0	3	16	1	2.05	18

*Not included in questionnaire.

Table 24. Characteristic Rank of Influence Comparison of Questionnaire, PWS Reading, and ECT Reading

Characteristic	Reader Question-naire	PWS Reading	ECT Reading
2. Overall organization	1	2	1
1. Statement of thesis	2	4	6
5. Supporting material	3	1	3
4. Noteworthy ideas	4	3	2
11. Subject-verb agreement	5	15	16
7. Paragraphing, transition	6	6	5
8. Sentence variety	7	11	9
16. Level of diction	8	7	7
17. Range of vocabulary	9	17	11
3. Rhetorical strategy	10	5	4

(characteristic 15), and it was presented in a slightly different manner. Part II of the reader questionnaire simply asked for an indication of how much each characteristic usually influences the reader's judgment of an essay of the type used for the ECT. Possible responses were "very heavy," "heavy," "some," or "none." Table 23 presents a tally of the results from Part II. Overall organization received the top rank on influence, with statement of thesis coming in a close second. The lowest rank was given to spelling. These results are in general agreement with the correlational analyses showing that the highest correlation with the PWS holistic score occurred with characteristic 2, overall organization. Moreover, an actual count of spelling errors did not correlate highly with the PWS holistic score—even though the correlation of .17 was statistically significant. A comparative ranking of the importance of characteristics as determined by the two procedures is of interest, and this is presented in Table 24.

Summary of Other Comparisons

Three additional kinds of comparisons were briefly considered: comparisons of different levels of writing, comparisons of experienced and inexperienced readers, and comparisons of what English professors say is important with what emerges as important from analyses of their judgments. The score level comparisons showed that certain characteristics operate as influences primarily at very high levels of skill while others operate primarily at low levels. The comparisons of experienced and inexperienced readers revealed some statistically significant differences between the two, but it was not clear whether these differences were the result of experience or of other unmeasured variables such as age and educational background. The results of a comparison of what readers said (on the questionnaire administered prior to the reading) and what they actually did showed reasonably good agreement between the two, with the exception that agreement of subject and verb proved to be much less important than perceived beforehand.

SUMMARY AND CONCLUSIONS

The principal objective of the research reported here was to identify important elements of writing skill as perceived from an examination of a national sample of writing. The brief, impromptu essays examined represent only one kind of writing, but an important kind. The first task in the research effort was to develop a taxonomy of the characteristics of these brief essays through consultations with writing experts. Twenty characteristics were identified, and those were organized into three categories: discourse, syntactic, and lexical. Each characteristic could be perceived positively, negatively, or neutrally.

After developing the taxonomy, an evaluation form was created from it and used by a national representation of 20 English professors who were invited to a central scoring session in which each of a total of 806 essays was read, scored, and analyzed by two professors working independently. Although the essays represented four groups randomly sampled from all essays written during the ECT administration of December 1979, all identifying information (sex, name, test center code, etc.) except registration numbers was removed before copies of the essays were made. Of the four groups sampled, all but one reported that English was their best language. These groups, identified through standard self-descriptive questionnaire responses, were: black, white, Hispanic who reported that English was their best language, and Hispanic who reported that English was not their best language.

The special reading of the sampled essays supplemented other information already available for the persons who wrote the essays. This existing information included SAT, TSWE, and ECT multiple-choice test scores, questionnaire information, and holistic judgments of the essays obtained as a regular part of the December ECT administration. Working for one full day, the special project readers assigned two additional holistic scores, completed two evaluation forms, and made one set of detailed annotations on each essay. Thus, following the special reading, a total of four holistic judgments was available for each of these essays: two assigned independently by the ECT readers in December 1979, and two assigned independently by the special project readers in September 1980. A total of 40 variables were developed from the test scores, the holistic judgments, the 20 taxonomy characteristics, and staff ratings of certain mechanical features of the essays (lines written, paragraphs, spelling errors, handwriting quality, and neatness).

Correlational analyses of the 40 variables focused primarily on relationships between the holistic judgments and the other variables. Recognizing that relationships were attenuated somewhat by the relatively low reliabilities of the holistic judgments, the correlations observed were substantial for most variables. A few of the taxonomy characteristics were given little attention by readers, however, and consequent range restrictions further limited the relationships obtainable for these variables. The (summed)

holistic score assigned during the ECT administration reading was useful as a standard of comparison, since it had been obtained independently of and prior to other project information. Multiple-choice test scores, with the exception of the SAT-mathematical, correlated well (r=.50 or better) with the ECT holistic score. Some of the taxonomy-characteristic scores—principally the discourse characteristics—correlated well with the ECT holistic score; others did so only within certain groups in the sample. Overall organization, for example, correlated highly (r=.52) with the ECT holistic score, as did noteworthy ideas (r=.48) and supporting material (r=.47). In contrast, subject-verb agreement did not correlate nearly as well (r=.19), nor did use of modifiers (r=.12) and figurative language (r=.14). Interestingly, essay length was a substantial correlate of the ECT holistic score.

Multiple regression analyses explored the utility of the available variables as predictors of the ECT holistic score when entered in variable sets. The discourse characteristics, when used in combination, proved to be effective predictors of the ECT holistic score. Five of the nine discourse characteristics contributed significantly in the prediction and attained a multiple correlation of .59. Only two of the six syntactic characteristics (pronoun usage and parallel structure) contributed to the prediction and resulted in a multiple correlation of only. 34. Three of the five lexical characteristics (level of diction, precision of diction, and spelling) contributed and resulted in a multiple correlation of .44. Four of five mechanical scores contributed to the prediction and attained a multiple correlation of .58—almost as high as that attained using the discourse characteristics. When all 20 characteristics of the taxonomy were entered simultaneously, a total of 8 contributed significantly to the prediction, with a multiple correlation of .61, which was only slightly better than the prediction possible with 5 discourse characteristics. The taxonomy characteristics added to the correlation possible using the ECT objective score, with six characteristics contributing and increasing the multiple correlations from .58 to .70. Adding essay length increased the multiple correlation further to .74. Given the relatively low reliability of the ECT holistic score, one could not expect to achieve a multiple correlation much higher.

Group comparisons revealed some differences in the correlational and regression relationships. Even though the syntactic and lexical characteristics were not, generally, important correlates of the holistic scores, some of them were for the Hispanic (N) group. In particular, subject-verb agreement and range of vocabulary correlated .50 and .51, respectively, with the ECT holistic score for Hispanics who reported that English was not their best language. For all three of the other groups, discourse characteristics were better predictors than either syntactical or lexical characteristics. When the importance of predictive relationships and the frequency with which characteristics were noted for a group were considered in combination, similar instructional implications were indicated for all four groups. Organization, thesis statement, the use of supporting materials, and paragraphing and transition were suggested as focuses for instruction. Thus, in instructing Hispanics who do not speak English well, while it may be important to emphasize subject-verb agreement and range of vocabulary (because these characteristics correlate well with overall judgments of skill), it may be still more important to emphasize discourse skills, because these not only correlate well with overall judgments but also are noted more frequently in the writing of such persons. Comparisons of the predictive utility of multiple-choice tests showed no important correlational differences across groups, but the usual overpredictions of minority performance were observed.

Two conclusions seem justified as a result of the research reported. One of these has already been suggested. Different writing problems occur with different frequencies for different groups, but three elements of writing stand out as most important for all groups: organization, thesis development, and the use of supporting materials. Here, "thesis development" includes both a thesis statement, implicit or explicit, and the development of the thesis. While problems of syntax and word usage are also important, they appear to be less so than the basics of discourse. Moreover, such problems may be inherently related to cultural and linguistic experiences and thus will change only slowly, as these experiences change. A second conclusion is that, beyond the need to emphasize discourse characteristics at all levels of skill, certain features may be important only at the highest or the lowest levels of skill. As a result, it seems unnecessary to burden all students with the study of all aspects of writing. These conclusions are similar to those reached by others who have either taught composition or conducted research, especially Shaughnessy (1977) and Freedman (1979). The characteristics identified as important by the present study differ little from those cited by Freedman; she concluded that instruction should aim more to help students organize their ideas logically and aim less to correct sentence structure and word mechanics.

Other conclusions are implied, but these are more related to measurement issues which were not the focus of this investigation. Consequently, these conclusions may be made only tentatively at this time. One is that the direct component (the essay) of writing assessments *does* seem to add to what is assessed through indirect measures. Specifically, elements of discourse, even when rated in the crude fashion of the present investigation, contribute to the prediction of holistic scores, over and beyond the prediction possible with objective measures. In addition, the quality of diction and the use of parallel structure contribute to multiple predictions.

A second implied conclusion with both measurement and instructional implications, is that little is known about the levels of writing skill and how they might be described. The results of this study show, as mentioned above, that

different elements of skill operate at different levels. There is a need to investigate these levels in much more detail so that instruction may focus at the appropriate level for each student and thus be more efficient in its delivery.

There is a final implication for the scoring of essays. It seems possible that, from the type of data analyzed in this study, a scoring rubric could be developed. That is, different scores could be related to specific characteristics of essays such that a given score would take on a descriptive meaning. Such a rubric would have two principal advantages: it would increase the reliability of judgmental ratings, and it would provide specific information describing levels of skill. Data on levels of skill could be used in instruction, placement, institutional planning, and institutional impact studies. Such data collected over time would also be a valuable social indicator.

In summary, we believe that we have learned the following from this study:

1. For a writing task such as that presented in the ECT (an argumentative or persuasive task), certain characteristics of discourse figure heavily in the judgments of readers, while syntactic and lexical characteristics are rarely of paramount importance.

2. Essay length is an important influence on reader judgments, probably because good discourse requires length for proper development.

3. Differences for four groups sampled are primarily in syntactic and lexical characteristics, not in characteristics of discourse.

4. Multiple-choice scores predict essay scores similarly for all groups sampled, with the exception that lower-performing groups tend to be overestimated by multiple-choice scores.

Much more needs to be learned, however, before more reliable and practical procedures can be developed for the assessment of writing skill. Specifically, these steps appear to be needed:

1. More work is needed to define levels of writing skill. Glaser (1981) has emphasized the need for the diagnosis of levels of performance in basic skills, generally, and has given examples of how diagnosis has been approached in arithmetic and in writing. Such diagnosis can be used in teaching and in teacher training.

2. Better ways of integrating information from different kinds of assessment are needed. Presently, assessments like the ECT combine direct and indirect assessment information because the direct assessment information is not considered reliable enough for reporting. A single ECT score is reported by weighting the direct and indirect information in accordance with the amount of testing time associated with each. Such a weighting may not be the most appropriate. Another approach to combining scores might be to weight scores by relative reliabilities.

3. Reliable diagnostic subscores could possibly be generated by combining part scores from indirect assessments with analytical scores from direct assessments. For example, a lexical judgmental score might be combined with vocabulary or other word usage item scores; a syntactic judgmental score might be combined with indirect item scores from ECT and TSWE; a discourse judgmental score might be combined with a general factor.

4. Given the practical difficulties associated with the diagnosis of written products through judgmental methods, it may be that the best approach to diagnosis will be found in automated methods. If judgmental procedures were restricted to holistic evaluations and diagnostic procedures restricted to indirect and automated methods, an integration of information from all three would probably provide a useful diagnosis. Since indirect and holistic judgmental procedures are well established, the principal need is to develop further research along the lines initiated by Page (1968a, 1968b).

5. Analyses of varied samples of writing from the same students are needed. As has been emphasized in this report, the ECT essay stimulus elicits a particular kind of essay and calls on particular kinds of skills. Other stimuli and other discourse modes are needed to determine whether the findings of the present study can be generalized to other kinds of writing.

6. Studies of language influences for persons with varying language backgrounds would be useful. Although the analyses of this report did not point to important influences on ECT holistic essay scores resulting from language and cultural differences, neither issue was thoroughly examined. Clearly, persons who do not speak English well will have difficulty with English composition. What is not clear is the specific difficulties that are encountered, how these vary for different native languages, and how best to assess composition skills in non-native speakers and in persons who may have language interference problems because of their language experience.

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ENGLISH COMPOSITION TEST WITH ESSAY

Part A

Time—20 minutes

Directions: You will have 20 minutes to plan and write the essay assigned below. You are expected to express your thoughts carefully, naturally, and effectively. Be specific. Remember that how well you write is much more important than how much you write. DO NOT WRITE ON A TOPIC OTHER THAN THE ONE ASSIGNED BELOW. AN ESSAY ON A TOPIC OF YOUR OWN CHOICE WILL RECEIVE NO CREDIT.

You must fit your essay on the answer sheet provided. You will receive no other paper on which to write. You will find that you have enough space if you write on every line, avoid wide margins, and keep your handwriting to a reasonable size.

First, consider carefully the following quotation. Then, read and follow the directions that are given in the assignment that follows the quotation.

> "Not so long ago, the phrase 'a magic carpet' suggested adventure or fantasy. Now, most of us would think that a magic carpet was one we did not have to vacuum."
>
> Assignment: Is life so focused on the practical that fantasy and adventure have lost their appeal? Write an essay in which you express your opinion, using one or two specific examples from your reading or observation.

DO NOT WRITE IN YOUR TEST BOOK. You will receive credit only for what you write on your answer sheet.

BEGIN WRITING YOUR ESSAY ON THE ANSWER SHEET.

WHEN THE SUPERVISOR ANNOUNCES THAT TWENTY MINUTES HAVE PASSED, YOU MUST STOP WRITING THE ESSAY AND GO ON TO PART B IF YOU HAVE NOT ALREADY DONE SO. IF YOU FINISH YOUR ESSAY BEFORE THIS ANNOUNCEMENT, GO ON TO PART B AT ONCE.

PART A (ESSAY)

Begin your composition on this side of the sheet. If you need more space, you may continue in the area designated on the reverse side of this sheet.

NAME: _____ DATE OF BIRTH: / /
LAST FIRST M I

REGISTRATION NUMBER: _____ TEST CENTER NUMBER: _____

Continuation of Part A (ESSAY) from reverse side. Write below only if you need more space.

DO NOT WRITE IN THIS AREA.

THE STUDENT DESCRIPTIVE QUESTIONNAIRE

Your responses to the Student Descriptive Questionnaire help colleges individualize the information they send you to fit your interests and needs. Your answers may also assist counselors and admissions officers in their appraisal of your readiness to do college-level work. The SDQ enables you to present your interests, accomplishments, and plans along with the test score information on your ATP Report.

Answer each question as accurately as possible because your answers to most SDQ questions will appear on the copies of the report which will be sent to you, to your high school, and to the colleges that you designate. Your answers to other questions will *not* appear on your individual report or your school and college reports but will be used for research and planning by educational institutions. Though you are encouraged to answer all questions, you may omit the answer to a specific question if you wish.

If you indicate in item I of the questionnaire that you want to be included in the Student Search Service, some of the information you give will help identify you to colleges and scholarship agencies interested in students with certain characteristics. You need to provide your complete mailing address, including your zip code, to participate in the Student Search Service.

Most of the questions have been written for students currently in high school. If you are no longer in high school, answer them as accurately as you can. How-

ever, be sure to answer those questions specifically directed to you. Record your answers in item 16 of the Registration Form.

Note: **If you have previously filled out a Student Descriptive Questionnaire and want to update your answers, record one of the following options at the beginning of the SDQ response area.**

(A) Substitute my answers here for my previous answers to the same questions: keep the other information I gave earlier.
(B) Delete all answers I gave earlier: include only my current answers.
(C) Delete all my previous answers. I do not wish to have SDQ information in my records.

For further information on changing descriptive information, see page 15.

1. **The College Board's Student Search Service is an information service for students, colleges, and governmental scholarship agencies. It is free to all students who participate in the ATP and works this way:**

   If you ask to participate, colleges and scholarship agencies interested in students with your characteristics can ask for and receive your name, address, sex, high school, and intended major. The answers you give to the questions below may be used to determine if you fit the characteristics colleges have requested in the Student Search Service. Your individual responses will not be reported. Different colleges and agencies will be interested in students with specific characteristics, such as place of residence, range of test scores, and intended college majors. For example, a state scholarship agency may want to identify all students within that state who are eligible for the Basic Educational Opportunity Grant program in order to notify them of when and how to apply.

   By participating, you may receive information from a variety of colleges and scholarship agencies about their programs, admissions procedures, and financial aid opportunities. The mail you receive may include information from a college well known to you or come from one unfamiliar to you but with the academic program and other features you find important. In either case the Student Search Service can provide you with information about educational opportunities you might not otherwise discover.

   Your name will be made available to the Student Search Service only if you answer "YES" to this item.

   (Y) Yes, I want to be included in the Student Search Service.
   (N) No, I do not want to be included in the Student Search Service.

2. **What kind of high school are you attending?**

   (A) Public (B) Other than public

3. **Which of the following best describes your present high school program?**

   (A) Academic or college preparatory
   (B) General
   (C) Career-oriented (business, vocational, industrial arts)
   (D) Other

4. **About how many students are there in your high school class?**

   (A) Fewer than 100 (B) 100-249 (C) 250-499
   (D) 500-749 (E) 750 or more

5. **What is your most recent high school class rank? (For example, if you are 15th in a class of 100, you are in the second tenth.) If you do not know your rank or rank is not used in your school, give your best estimate.**

   (A) Highest tenth, (B) Second tenth } top fifth
   (C) Second fifth
   (D) Middle fifth
   (E) Fourth fifth
   (F) Lowest fifth

Questions 6 through 11 ask you to blacken the letter corresponding to the total years of study you expect to complete in certain subject areas. Include in the total only courses you have taken since beginning the ninth grade and those you expect to complete before graduation from high school. Count less than a full year in a subject as a full year. Do not count a repeated year of the same course as an additional year of study.

(A) One year or the equivalent
(B) Two years or the equivalent
(C) Three years or the equivalent
(D) Four years or the equivalent
(E) More than four years or the equivalent
(F) I will not take any courses in the subject area.

6. **English**
7. **Mathematics**
8. **Foreign Languages**
9. **Biological Sciences (for example, biology, botany, or zoology)**
10. **Physical Sciences (for example, chemistry, physics, or earth science)**
11. **Social Studies (for example, history, government, or geography)**

For each of the subject areas in questions 12 through 17, blacken the *latest* year-end or midyear grade you received since beginning the ninth grade. For example, if you are a senior and have not taken biology or any other biological science since your sophomore year, indicate that year-end grade. If you are a junior and have completed the first half of the year in an English course, indicate that midyear grade.

If you received the grade in an advanced, accelerated, or honors course, also blacken the letter H.

(A) Excellent (usually 90-100 or A)
(B) Good (usually 80-89 or B)
(C) Fair (usually 70-79 or C)
(D) Passing (usually 60-69 or D)
(F) Failing (usually 59 or below or F)
(G) Only "pass-fail" grades were assigned and I received a pass.
(H) The grade reported was in an advanced, accelerated, or honors course.

12. **English**
13. **Mathematics**
14. **Foreign Languages**

15. Biological Sciences

16. Physical Sciences

17. Social Studies

18. Will you have completed advanced high school or college-level work before entering college? If so, mark the letter for each field in which you plan to apply for advanced placement, credit-by-examination, or exemption from required courses.

(A) English
(B) Mathematics
(C) Foreign Languages
(D) Biological Sciences
(E) Physical Sciences
(F) Social Studies
(G) Art/Music

19. On the average, how many hours per week do you work in a part-time job? (Exclude vacations.)

(A) None
(B) Less than 6 hours
(C) 6 to 10 hours
(D) 11 to 15 hours
(E) 16 to 20 hours
(F) 21 to 25 hours
(G) 26 to 30 hours
(H) More than 30 hours

20. How much have you participated in community or church groups while in high school?

(A) I have not been a member of any community or church group.
(B) I have belonged to one or two groups but have not participated actively.
(C) I have participated actively in one or two groups but have not held any major offices (for example, president, chairman, or treasurer).
(D) I have participated actively in more than two groups but have not held any major offices.
(E) I have participated actively and have held a major office in at least one community or church group.

21. How much have you participated in athletics in or out of high school?

(A) I have not participated in athletics.
(B) I have participated in individual or intramural athletics.
(C) I have been on one or more varsity teams but have not earned a varsity letter.
(D) I have earned one or more varsity letters in a single sport.
(E) I have earned varsity letters in more than one sport.

22. How much have you participated in clubs and organizations in high school?

(A) I have not been a member of any club or organization.
(B) I have belonged to some organizations but have not held any major offices (for example, president, editor, or class or school representative).
(C) I have held one or two major offices.
(D) I have held three or four major offices.
(E) I have held five or more major offices.

23. During your high school years how many honors or awards (for example, essay contest, debating tournament, science fair, music, art or theater competition, or membership in a scholastic honors group) have you received?

(A) None (B) One or two (C) Three or four
(D) Five or six (E) Seven or more

24. What is the highest level of education you plan to complete beyond high school?

(A) A two-year specialized training program (for example, electronics or laboratory technician)
(B) A two-year Associate of Arts degree (A.A.)
(C) Bachelor's degree (B.A. or B.S.)
(D) Master's degree (M.A. or M.S.)
(E) Doctor's or other professional degree (such as M.D. or Ph.D.)
(F) Other or undecided

25. What is the date of your high school graduation? Blacken month and last two digits of year.

26. When do you expect to enter college? Blacken month and last two digits of year.

Your response to question 27 will not be included in the reports that are sent to you, your school, and the colleges you designate.

27. Do you plan to apply for financial aid at any college?

(Y) Yes (N) No

28. When you enroll, do you expect to attend college

(A) full-time (B) part-time

29. When you enroll, do you expect to attend college during the

(A) day (B) evening

30. Where do you prefer to live during your first two years in college?

(A) At home
(B) Single-sex dorm
(C) Coed dorm
(D) Fraternity or sorority house
(E) On-campus apartment
(F) Off-campus apartment

31. Are you a United States citizen?

(Y) Yes (N) No

32. Are you a veteran of the United States Armed Forces?

(Y) Yes (N) No

Questions 33 through 36 are for students who have finished high school and have already attended college. If you have not, go on to the paragraph preceding question 37.

33. Please put the code number of the college you are attending or most recently attended in the spaces provided and blacken the corresponding ovals. See the gray-bordered pages for college code numbers.

34. Are you enrolled in that college now?

(Y) Yes (N) No

35. Approximately what was your grade point average at that college on a scale of 0 (F) to 4 (A)?

(A) 3.5 or above
(B) 3.0—3.4
(C) 2.5—2.9
(D) 2.0—2.4
(E) 1.5—1.9
(F) Below 1.5
(G) Not applicable

36. If you expect to transfer credits, at what level do you expect to enter the new college?

(A) First semester freshman
(B) Second semester freshman
(C) First semester sophomore
(D) Second semester sophomore
(E) Junior
(F) Senior

The College Board wants its tests and services to be fair and useful to all candidates. Research based on responses to questions 37 and 38 will help the College Board evaluate and improve its tests and services. Your responses will also be reported to your school and to those colleges that accept such information in order to make sure their programs are fair and useful to students of all racial and ethnic backgrounds.

37. How do you describe yourself?

(A) American Indian or Alaskan native
(B) Black or Afro-American or Negro
(C) Mexican-American or Chicano
(D) Oriental or Asian-American or Pacific Islander
(E) Puerto Rican
(F) White or Caucasian
(G) Other

38. Is English your best language?

(Y) Yes (N) No

Your responses to questions 39 and 40 will be used only for research. They will not be included in the ATP Reports that are sent to you, your school, and the colleges you designate.

39. Indicate the highest level of education completed by your father or male guardian.

(A) Grade school
(B) Some high school
(C) High school diploma
(D) Business or trade school
(E) Some college
(F) Bachelor's degree
(G) Some graduate or professional school
(H) Graduate or professional degree

40. Using the list in question 39, indicate the highest level of education completed by your mother or female guardian.

Questions 41 through 43 ask about your parents' financial situation and should be answered in consultation with them. Your individual responses will not be reported to anyone. Only summary responses for groups of students will be reported to colleges and high schools.

41. How many persons are dependent on your parent(s) or legal guardian for financial support? Be sure to include your parent(s) and yourself.

(A) Two (B) Three (C) Four (D) Five
(E) Six (F) Seven (G) Eight (H) Nine or more

42. During your first year in college, how many persons dependent on your parent(s) or legal guardian will be in college? Include yourself.

(A) One (B) Two (C) Three
(D) Four (E) Five or more

43. What was the approximate income of your parents before taxes last year? Include taxable and nontaxable income from all sources.

(A) Less than $3,000 a year (about $57 a week or less)
(B) Between $3,000 and $5,999 a year (from $58 to $114 a week)
(C) Between $6,000 and $8,999 a year (from $115 to $173 a week)
(D) Between $9,000 and $11,999 a year (from $174 to $230 a week)
(E) Between $12,000 and $14,999 a year (from $231 to $288 a week)
(F) Between $15,000 and $17,999 a year (from $289 to $346 a week)
(G) Between $18,000 and $20,999 a year (from $347 to $403 a week)
(H) Between $21,000 and $23,999 a year
(I) Between $24,000 and $26,999 a year
(J) Between $27,000 and $29,999 a year
(K) Between $30,000 and $34,999 a year
(L) Between $35,000 and $39,999 a year
(M) Between $40,000 and $44,999 a year
(N) Between $45,000 and $49,999 a year
(O) $50,000 a year or more

44. You may want to receive help outside regular course work from the college you plan to attend. If so, blacken the letter for each area in which you may want help.

(A) Counseling about educational plans and opportunities
(B) Counseling about vocational/career plans and opportunities
(C) Improving mathematical ability
(D) Finding part-time work
(E) Counseling about personal problems
(F) Increasing reading ability
(G) Developing good study habits
(H) Improving writing ability

Questions 45 and 46 concern your interests in extracurricular activities in high school and your plans to participate in college.

45. Blacken the letter for each activity in which you participated while in high school.

(A) Athletics—interscholastic, intramural, or community
(B) Ethnic or racial activities or organizations
(C) Journalism, debating, or dramatic activities
(D) Art, music, or dance
(E) Preprofessional or departmental clubs—for example, Future Teachers of America, American Society of Civil Engineers
(F) Religious activities or organizations
(G) Social clubs or community organizations
(H) Student government

46. Using the list in question 45, blacken the letter for each activity in which you plan to participate in college.

Questions 47 through 60 concern how you feel you compare with other people your own age in certain areas of ability. For each field, blacken the letter

(A) If you feel you are in the highest 1 percent in that area of ability
(B) If you feel you are in the highest 10 percent in that area of ability
(C) If you feel you are above average in that area of ability
(D) If you feel you are average in that area of ability
(E) If you feel you are below average in that area of ability

47. Acting ability
48. Artistic ability
49. Athletic ability
50. Creative writing
51. Getting along with others
52. Leadership ability
53. Mathematical ability
54. Mechanical ability
55. Musical ability
56. Organizing work
57. Sales ability
58. Scientific ability
59. Spoken expression
60. Written expression

61. From the list below, choose the field that would be your first choice for your college curriculum. Write the number of that field and blacken the corresponding ovals.

62. From the same list, choose the field that would be your second choice. Write the number of that field and blacken the corresponding ovals.

63. From the same list, choose the career field that you think you will pursue after college. Write the number of that field and blacken the corresponding ovals. If your exact choice does not appear, select the one most closely related.

FIELDS OF STUDY IN TWO- AND FOUR-YEAR COLLEGES AND CAREER CHOICES

100 AGRICULTURE
101 agriculture economics
102 agronomy, field crops
103 animal science
104 dairy science
105 farming, ranching
106 fish and game, wildlife management
107 food science
108 horticulture
109 landscaping
110 soil sciences

125 ARCHITECTURE AND ENVIRONMENTAL DESIGN
126 architecture
127 city planning
128 urban development

150 ART
151 art history
152 commercial
153 design
154 fashion design
155 graphic arts
156 interior decorating
157 museum work
158 photography
159 printing
160 studio art

175 BIOLOGICAL SCIENCES
176 bacteriology
177 biochemistry
178 biology
179 biophysics
180 botany
181 ecology
182 marine biology
183 physiology
184 zoology

200 BUSINESS AND COMMERCE
201 accounting
202 advertising
203 business management and administration
204 court reporting
205 finance and banking
206 hotel and restaurant administration
207 industrial management
208 marketing
209 personnel work
210 real estate
211 sales and retailing
212 secretarial studies
213 transportation and commerce

225 COMMUNICATIONS
226 film
227 journalism
228 radio and television

250 COMPUTER SCIENCE AND SYSTEMS ANALYSIS
251 computer science
252 data processing
253 systems analysis

275 EDUCATION
276 agricultural education
277 art education
278 business education
279 child development and nursery education
280 college teaching
281 educational administration
282 education of exceptional children
283 education of the deaf
284 education of the mentally retarded
285 elementary education
286 general education
287 guidance counseling
288 health education
289 home economics education
290 industrial arts education
291 music education
292 physical education
293 recreation
294 secondary education
295 speech therapy
296 vocational trade and industrial education

325 ENGINEERING
326 aerospace and aeronautical engineering
327 agricultural engineering
328 air-conditioning engineering
329 architectural engineering
330 ceramic engineering
331 chemical engineering
332 civil engineering
333 construction and transportation
334 drafting
335 electrical engineering
336 engineering aide
337 engineering design
338 engineering sciences
339 industrial and management engineering
340 industrial laboratory technology
341 instrumentation technology
342 materials science
343 mechanical engineering
344 metallurgical engineering
345 mining and mineral engineering
346 naval architecture and marine engineering
347 nuclear technology
348 petroleum engineering
349 plastics technology
350 quality control technology
351 surveying
352 textile engineering

375 ENGLISH AND LITERATURE
376 creative writing
377 English
378 literature
379 speech

400 ETHNIC STUDIES
401 American Indian studies
402 black studies
403 Mexican-American studies
404 Spanish-American studies

425 FOREIGN LANGUAGES
426 Classical languages
427 Eastern languages
428 French
429 German
430 interpreting/translating
431 Italian
432 linguistics
433 Russian
434 Spanish

450 FORESTRY AND CONSERVATION

475 GEOGRAPHY

500 HEALTH AND MEDICAL PROFESSIONS
501 dental assisting
502 dental hygiene
503 dental technology
504 health and safety
505 laboratory technology
506 medical assisting
507 medical records librarian
508 medical technology
509 nursing — practical
510 nursing — registered
511 occupational therapy
512 optometry
513 pharmacy
514 physical therapy
515 predentistry/dentistry
516 premedicine/medicine
517 preveterinary medicine/veterinary medicine
518 radiology and X-ray technology

550 HISTORY AND CULTURES
551 American
552 ancient
553 area and regional
554 European

575 HOME ECONOMICS
576 clothing and textiles
577 family relations
578 food and nutrition
579 infant and child care
580 institution management

600 LIBRARY SCIENCE

625 MATHEMATICS
626 statistics

650 MILITARY SCIENCE
651 air science
652 merchant marine
653 military science — army
654 naval science

675 MUSIC
676 composition and theory
677 instrumental music
678 music history
679 voice

700 PHILOSOPHY AND RELIGION
701 ministry
702 philosophy
703 religion
704 theology

725 PHYSICAL SCIENCES
726 astronomy
727 chemistry
728 earth science
729 geology
730 meteorology
731 oceanography
732 physical sciences
733 physics

750 PSYCHOLOGY
751 child psychology
752 experimental psychology
753 general psychology
754 social psychology

775 SOCIAL SCIENCES
776 anthropology
777 correction administration
778 economics
779 fire science
780 foreign service
781 government service/politics
782 industrial relations
783 international relations
784 law enforcement/police science
785 political science
786 prelaw/law
787 public administration
788 social work
789 sociology

800 THEATER ARTS
801 acting
802 dance
803 drama
804 theater arts

825 TRADE AND VOCATIONAL
826 airline hosting
827 automotive maintenance
828 aviation maintenance
829 building construction
830 carpentry
831 cosmetology
832 mortuary service

900 OTHER

999 UNDECIDED

Appendix C. Essay Evaluation Form and Instructions for Annotating Essays

Reader Number _____ Holistic Score _____

Essay Evaluation Form

Instructions: Below are listed twenty characteristics that are often used to judge a piece of writing. The characteristics may be positive or negative. Please check those characteristics in the appropriate column, if you believe they are especially strong (++), strong (+), weak (-), or especially weak (--) features of the essay.

GENERAL CHARACTERISTICS	++	+	-	--
1. Statement of thesis and purpose (explicit or implicit)	___	___	___	___
2. Overall organization	___	___	___	___
3. Rhetorical strategy	___	___	___	___
4. Noteworthy ideas: Originality of thought or insight	___	___	___	___
5. Use of supporting materials: examples, illustrations, personal experience, facts, statistics, etc.	___	___	___	___
6. Writer's voice: tone and attitude	___	___	___	___
7. Effective paragraphing, transition	___	___	___	___
8. Variety of sentence patterns	___	___	___	___
9. Sentence logic	___	___	___	___
SYNTACTICAL CHARACTERISTICS				
10. Pronoun usage: agreement with antecedent, case, etc.	___	___	___	___
11. Subject-Verb agreement, verb forms, etc.	___	___	___	___
12. Parallel structure: clauses, series, etc.	___	___	___	___
13. Idiomatic usage: prepositions and phrases	___	___	___	___
14. Punctuation	___	___	___	___
15. Use of modifiers	___	___	___	___
LEXICOGRAPHIC CHARACTERISTICS				
16. Appropriate levels of diction	___	___	___	___
17. Range of vocabulary	___	___	___	___
18. Precision of diction, conciseness of phrasing	___	___	___	___
19. Use of figurative language: metaphor, analogy, cliché	___	___	___	___
20. Spelling	___	___	___	___

INSTRUCTIONS FOR ANNOTATING ESSAYS*

Use this list of editing symbols to annotate the essays. If an essay is either strong or weak with regard to any of the following characteristics, mark the appropriate symbol in the margin of the essay and underline or circle the text that exemplifies the characteristic.

General Characteristics

1.	St/Th	Statement of thesis or purpose
2.	Org	Organization
3.	RhSt	Rhetorical strategy
4.	Or/In	Originality or insight
5.	Sup/Ex	Examples, illustrations, facts, etc.
6.	Tone	Tone or attitude of the writer
7.	¶/trans	Paragraphing and transition
8.	Var/S	Variety of sentence patterns
9.	S/Lg	Sentence logic

Syntactical Characteristics

10.	Pro/Us	Pronoun usage: case, agreement, reference, etc.
11.	S/V	Subject-verb agreement, tense forms, etc.
12.	//St	Parallel structure: clauses, series, etc.
13.	Id	Idiomatic usage: prepositions, phrases, etc.
14.	P	Punctuation
15.	Mod	Placement of modifiers

Lexicographic Characteristics

16.	Lv/D	Level of diction, appropriate or inappropriate
17.	Vocab	Range of vocabulary
18.	D/Con/Red	Precision of diction, conciseness of phrasing, redundancy
19.	Fig	Figurative language: metaphor, analogy, simile, cliché
20.	Sp	Spelling

* Special written comments are welcome if time permits. General or specific comments should be written on the bottom of the second page of the copy.

Appendix D. Data Description

Table D-1. Means, Standard Deviations, and Ranges for Pooled Samples Adjusted for Oversampling (N-806)

Characteristics	Means	Standard Deviations	Ranges
1. Statement of thesis	7.14	1.51	2-10
2. Overall organization	6.32	1.73	2-10
3. Rhetorical strategy	6.00	1.55	2-10
4. Noteworthy ideas	6.17	1.81	2-10
5. Supporting material	6.53	2.02	2-10
6. Tone and attitude	6.39	1.20	3-10
7. Paragraphing and transition	5.97	1.43	2-10
8. Sentence variety	6.16	1.20	2-10
9. Sentence logic	5.83	1.32	2- 9
10. Pronoun usage	6.01	0.89	2- 9
11. Subject-verb agreement	6.06	0.88	2- 9
12. Parallel structure	6.16	0.78	2-10
13. Idiomatic usage	5.92	0.81	2- 9
14. Punctuation	5.95	1.00	2-10
15. Use of modifiers	5.97	0.46	2- 8
16. Level of diction	6.18	1.05	2-10
17. Range of vocabulary	6.06	1.17	2-10
18. Precision of diction	5.68	1.12	2-10
19. Figurative language	5.89	0.85	2-10
20. Spelling (rating)	5.82	1.01	2- 9
21. Essay length	29.51	10.47	6-61
22. Paragraphs	2.96	1.24	1- 5
23. Spelling errors (count)	0.76	1.13	0- 5
24. Handwriting	3.46	1.07	1- 5
25. Neatness	3.24	1.02	1- 5
26. FWS Discourse	56.49	10.12	22-83
27. FWS Syntactic	36.07	3.27	14-50
28. FWS Lexical	29.62	3.67	15-45
29. FWS Mechanical	16.84	3.17	7-24
30. FWS Composite	122.19	14.87	60-169
31. ECT Holistic	5.25	1.30	2- 8
32. FWS Holistic	5.36	1.43	2- 8
33. Total Holistic	10.60	2.42	4-16
34. SAT-V	503.10	97.18	200-750
35. Vocabulary	50.62	10.39	20-78
36. Reading	50.17	9.81	20-74
37. SAT-M	542.57	101.91	200-790
38. TSWE	49.93	8.58	20-60
39. ECT Reported	524.85	100.52	220-780
40. ECT Objective	30.79	11.87	-7 - 63

Table D-2. Variable Means

Characteristic	Sample			
	Black (202)	White (202)	Hispanic (Y) (202)	Hispanic (N) (200)
1. Statement of thesis	6.35	7.19	6.61	5.78
2. Overall organization	5.57	6.38	5.55	5.06
3. Rhetorical strategy	5.50	6.04	5.42	4.96
4. Noteworthy ideas	5.28	6.23	5.48	5.11
5. Supporting material	5.56	6.60	5.56	5.18
6. Tone & attitude	5.91	6.42	6.04	5.80
7. Paragraphing and transition	5.51	6.00	5.44	5.03
8. Sentence variety	5.86	6.18	6.10	5.35
9. Sentence logic	5.48	5.85	5.63	4.65
10. Pronoun usage	5.79	6.02	5.94	5.28
11. Subject-verb agreement	5.79	6.07	6.02	4.98
12. Parallel structure	6.02	6.17	6.00	5.71
13. Idiomatic usage	5.83	5.93	5.72	4.98
14. Punctuation	5.63	5.98	5.81	5.23
15. Use of modifiers	5.94	5.98	5.98	5.89
16. Level of diction	5.90	6.20	5.99	5.46
17. Range of vocabulary	5.67	6.08	5.80	5.27
18. Precision of diction	5.37	5.70	5.52	4.64
19. Figurative language	5.80	5.90	5.87	5.67
20. Spelling	5.69	5.83	5.73	5.40
21. Essay Length	24.92	29.79	26.45	26.32
22. Paragraphs	2.75	2.98	2.54	2.86
23. Spelling errors	0.79	0.76	0.73	1.00
24. Handwriting	3.39	3.47	3.37	3.28
25. Neatness	3.05	3.25	3.13	3.04
26. PWS Discourse	51.06	56.87	51.97	46.86
27. PWS Syntactic	34.98	36.15	35.48	32.06
28. PWS Lexical	28.43	29.71	28.90	26.43
29. PWS Mechanical	16.02	16.90	16.02	15.85
30. PWS Composite	114.48	122.73	116.35	105.35
31. ECT Holistic	4.43	5.30	4.60	3.88
32. PWS Holistic	4.54	5.42	4.65	3.69
33. Total Holistic	8.97	10.72	9.25	7.58
34. SAT-V	448.96	507.03	454.50	382.25
35. Vocabulary	44.77	51.06	45.00	35.46
36. Reading	45.15	50.52	45.90	41.24
37. SAT-M	452.38	548.02	490.59	465.25
38. TSWE	43.61	50.37	45.45	35.76
39. ECT Reported	454.46	529.80	462.57	399.35
40. ECT Objective	23.18	31.34	23.72	16.96

Table D-3. Standard Deviations

Characteristics	Black (202)	White (202)	Hispanic(Y)(202)	Hispanic(N)(200)
1. Statement of thesis	1.68	1.49	1.64	1.73
2. Overall organization	1.67	1.72	1.56	1.65
3. Rhetorical strategy	1.42	1.55	1.52	1.55
4. Noteworthy ideas	1.65	1.81	1.77	1.71
5. Supporting material	1.82	2.01	1.97	1.76
6. Tone & attitude	1.00	1.20	1.12	1.08
7. Paragraphing and transition	1.44	1.43	1.36	1.40
8. Sentence variety	1.20	1.20	1.14	1.40
9. Sentence logic	1.26	1.33	1.20	1.52
10. Pronoun usage	1.00	0.88	0.87	1.35
11. Subject-verb agreement	1.01	0.86	0.81	1.51
12. Parallel structure	0.55	0.79	0.57	0.85
13. Idiomatic usage	0.86	0.80	0.84	1.40
14. Punctuation	0.99	1.00	0.80	1.24
15. Use of modifiers	0.50	0.46	0.34	0.58
16. Level of diction	1.01	1.05	0.97	1.22
17. Range of vocabulary	1.13	1.17	1.02	1.37
18. Precision of diction	1.27	1.11	1.06	1.53
19. Figurative language	0.70	0.86	0.74	0.95
20. Spelling	1.05	1.01	1.02	1.17
21. Essay Length	8.56	10.52	9.73	9.82
22. Paragraphs	1.22	1.24	1.23	1.23
23. Spelling errors	1.22	1.13	1.13	1.28
24. Handwriting	1.12	1.08	1.03	1.06
25. Neatness	0.98	1.02	0.92	1.00
26. FWS Discourse	9.16	10.08	9.58	9.80
27. FWS Syntactic	3.18	3.26	2.60	5.12
28. FWS Lexical	3.62	3.67	3.17	4.55
29. FWS Mechanical	2.91	3.19	2.75	3.01
30. FWS Composite	13.77	14.81	12.99	16.78
31. ECT Holistic	1.22	1.29	1.29	1.44
32. FWS Holistic	1.39	1.41	1.51	1.48
33. Total Holistic	2.33	2.38	2.52	2.67
34. SAT-V	100.62	95.71	104.33	97.82
35. Vocabulary	11.22	10.20	11.00	9.91
36. Reading	9.72	9.72	10.60	10.50
37. SAT-M	93.90	100.19	97.69	96.29
38. TSWE	9.83	8.30	9.95	10.90
39. ECT Reported	90.48	99.26	95.98	98.86
40. ECT Objective	10.69	11.76	11.38	10.68

Table D-4. Ranges

Characteristics	Sample			
	Black (202)	White (202)	Hispanic(Y)(202)	Hispanic(N)(200)
1. Statement of thesis	2-10	3-.0	2-10	2-9
2. Overall organization	2-9	2-10	2-10	2-9
3. Rhetorical strategy	2-9	3-10	2-10	2-9
4. Noteworthy ideas	2-9	2-10	2-10	2-10
5. Supporting material	2-10	2-10	2-10	2-10
6. Tone & attitude	3-9	4-10	3-10	3-9
7. Paragraphing and transition	2-10	2-10	2-9	2-9
8. Sentence variety	2-10	3-10	2-9	2-10
9. Sentence logic	2-9	2-9	2-9	2-8
10. Pronoun usage	2-8	3-9	3-9	2-9
11. Subject-verb agreement	2-8	3-9	3-9	2-9
12. Parallel structure	3-8	4-10	4-8	2-8
13. Idiomatic usage	2-8	2-9	2-8	2-8
14. Punctuation	3-8	3-9	3-8	2-10
15. Use of modifiers	2-8	3-8	4-8	4-8
16. Level of diction	4-9	3-10	3-9	2-8
17. Range of vocabulary	2-9	3-10	3-9	2-9
18. Precision of diction	2-9	3-10	2-8	2-8
19. Figurative language	3-8	4-10	4-10	2-9
20. Spelling	2-8	2-9	2-9	2-8
21. Essay Length	8-56	7-61	10-58	6-58
22. Paragraphs	1-5	1-5	1-5	1-5
23. Spelling errors	0-5	0-5	0-5	0-5
24. Handwriting	1-5	1-5	1-5	1-5
25. Neatness	1-5	1-5	1-5	1-5
26. FWS Discourse	24-78	31-82	30-83	22-73
27. FWS Syntactic	24-46	25-50	27-45	14-50
28. FWS Lexical	16-38	19-45	19-39	15-42
29. FWS Mechanical	7-24	7-24	9-22	7-22
30. FWS composite	70-157	82-169	85-154	60-162
31. ECT Holistic	2-8	2-8	2-8	2-8
32. FWS Holistic	2-7	2-8	2-8	2-8
33. Total Holistic	4-15	4-16	4-15	4-16
34. SAT-V	200-750	270-750	200-720	200-640
35. Vocabulary	20-75	24-78	20-74	20-64
36. Reading	20-74	25-74	20-71	20-74
37. SAT-M	200-680	310-790	210-750	260-670
38. TSWE	20-60	21-60	20-60	20-58
39. ECT Reported	270-780	310-780	220-700	230-680
40. ECT Objective	0-63	7-60	-3-58	-7-48

Table D-5. Population Data Description

Variables	Group					
	Total	Men	Women	Black	Hispanic	White
			Frequencies			
SAT-V	73,366	35,367	37,977	2,463	1,237	56,310
SAT-M	73,370	35,374	37,974	2,462	1,237	56,310
Reading	73,360	35,364	37,974	2,463	1,237	56,308
Vocabulary	73,364	35,366	37,976	2,463	1,237	56,309
TSWE	73,366	35,367	37,977	2,463	1,237	56,308
ECT Objective	85,542	41,314	44,201	2,791	1,392	60,587
ECT Reported	80,018	38,515	41,478	2,680	1,346	59,259
ECT Essay	85,542	41,314	44,201	2,791	1,392	60,587
			Means			
SAT-V	499.0	502.2	496.1	445.2	445.8	507.1
SAT-M	540.1	568.0	514.2	459.8	489.1	546.0
Reading	49.8	50.1	49.5	44.6	45.7	50.5
Vocabulary	50.1	50.4	49.9	44.5	43.6	51.0
TSWE	49.1	48.5	49.7	43.9	43.7	50.0
ECT Objective	30.0	29.0	30.9	23.1	22.9	31.1
ECT Reported	516.3	505.9	526.0	456.4	457.2	526.0
ECT Essay	5.1	5.0	5.2	4.6	4.6	5.2
			Standard Deviations			
SAT-V	101.4	100.7	102.0	99.2	107.0	97.6
SAT-M	101.5	99.6	96.2	97.2	97.9	99.3
Reading	10.4	10.4	10.3	9.9	10.8	10.1
Vocabulary	10.9	10.8	11.1	11.0	11.5	10.5
TSWE	8.7	8.8	8.5	9.8	10.4	8.1
ECT Objective	12.4	12.2	12.4	11.5	12.0	12.1
ECT Reported	101.7	101.6	100.9	95.8	101.7	98.7
ECT Essay	1.3	1.3	1.2	1.3	1.3	1.2
			Ranges			
SAT-V	200-800	200-800	200-800	200-760	200-750	200-800
SAT-M	200-800	200-800	210-800	200-740	210-790	210-800
Reading	20-78	20-78	20-78	20-76	20-76	20-78
Vocabulary	20-80	20-80	20-80	20-79	20-80	20-80
TSWE	20-60	20-60	20-60	20-60	20-60	20-60
ECT Objective	-9-69	-9-68	-6-69	-4-61	-7-63	-6-69
ECT Reported	200-800	200-800	220-800	220-740	220-800	200-800
ECT Essay	2-8	2-8	2-8	2-8	2-8	2-8

Table E-1. Matrix of Intercorrelations for Pooled Samples (N-806) Adjusted for Oversampling

Variable	Variable Number																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Statement of thesis	1.00	.63	.57	.54	.55	.44	.40	.32	.40	.44	.28	.30	.26	.18	.15	.41	.37	.24	.22	.23
2. Overall organization	.63	1.00	.64	.56	.59	.51	.58	.42	.46	.33	.19	.30	.24	.15	.10	.48	.39	.31	.21	.25
3. Rhetorical strategy	.57	.64	1.00	.66	.64	.55	.47	.43	.41	.37	.22	.36	.27	.16	.03	.49	.49	.34	.36	.21
4. Noteworthy ideas	.54	.56	.66	1.00	.72	.55	.43	.42	.39	.34	.19	.27	.25	.14	.07	.47	.53	.40	.36	.24
5. Supporting material	.55	.59	.64	.72	1.00	.53	.42	.37	.37	.27	.14	.28	.21	.14	.04	.39	.44	.32	.32	.22
6. Tone and attitude	.44	.51	.55	.55	.53	1.00	.33	.45	.30	.27	.15	.29	.32	.14	.10	.44	.40	.34	.33	.22
7. Paragraphing and transition	.40	.58	.47	.43	.42	.33	1.00	.40	.43	.29	.19	.28	.32	.28	.14	.34	.29	.30	.19	.15
8. Sentence variety	.32	.42	.43	.42	.37	.45	.40	1.00	.46	.36	.16	.29	.38	.27	.20	.40	.43	.28	.24	.29
9. Sentence logic	.40	.46	.41	.39	.37	.30	.43	.46	1.00	.43	.27	.26	.36	.35	.16	.46	.42	.40	.19	.29
10. Pronoun usage	.44	.33	.37	.34	.27	.27	.29	.36	.43	1.00	.56	.45	.45	.44	.12	.45	.48	.32	.30	.26
11. Subject-verb agreement	.28	.19	.22	.19	.14	.15	.19	.16	.27	.56	1.00	.32	.27	.39	.11	.27	.37	.28	.21	.30
12. Parallel structure	.30	.30	.36	.27	.28	.29	.28	.29	.26	.45	.32	1.00	.30	.43	.17	.36	.41	.21	.30	.23
13. Idiomatic usage	.26	.24	.27	.25	.21	.32	.32	.38	.36	.45	.27	.30	1.00	.34	.20	.43	.36	.33	.31	.35
14. Punctuation	.18	.15	.16	.14	.14	.14	.28	.27	.35	.44	.39	.43	.34	1.00	.21	.31	.31	.30	.20	.32
15. Use of modifiers	.15	.10	.03	.07	.04	.10	.14	.20	.16	.13	.11	.17	.20	.21	1.00	.18	.06	.15	.16	.17
16. Level of diction	.41	.48	.49	.47	.39	.44	.34	.40	.46	.45	.27	.34	.43	.31	.18	1.00	.55	.45	.29	.31
17. Range of vocabulary	.37	.39	.49	.53	.44	.40	.29	.43	.42	.48	.37	.41	.36	.31	.06	.55	1.00	.46	.39	.37
18. Precision of diction	.24	.31	.34	.40	.32	.34	.30	.28	.40	.32	.28	.21	.33	.30	.15	.45	.46	1.00	.33	.30
19. Figurative language	.22	.21	.36	.36	.32	.33	.19	.24	.19	.30	.21	.30	.31	.20	.16	.29	.39	.33	1.00	.16
20. Spelling (rating)	.23	.25	.21	.24	.22	.22	.15	.29	.29	.26	.30	.23	.35	.32	.17	.31	.37	.30	.16	1.00
21. Essay length	.34	.41	.36	.40	.41	.29	.27	.21	.22	.16	.05	.18	.06	.06	.03	.27	.26	.07	.11	.17
22. Paragraphs	.23	.33	.15	.24	.24	.17	.33	.12	.17	.15	.13	.11	.08	.11	.02	.12	.14	.09	.05	.12
23. Spelling errors (count)	-.06	-.17	-.12	-.15	-.15	-.20	-.13	-.22	-.25	-.01	-.13	-.10	-.22	-.17	-.08	-.21	-.18	-.28	-.05	-.49
24. Handwriting	.03	.13	.10	.03	.03	.11	.13	.10	.05	.11	.04	.02	.12	.02	.04	.07	.06	.12	.06	.04
25. Neatness	.02	.13	.11	.03	.00	.14	.14	.20	.12	.17	.10	.03	.19	.14	.06	.11	.17	.17	.14	.12
26. FWS Discourse	.74	.82	.82	.81	.81	.69	.65	.61	.61	.45	.25	.39	.38	.25	.14	.57	.56	.44	.36	.33
27. FWS Syntactic	.40	.33	.36	.32	.27	.32	.38	.41	.47	.79	.70	.67	.64	.75	.36	.50	.52	.41	.37	.41
28. FWS Lexical	.42	.47	.54	.57	.48	.49	.37	.47	.51	.52	.41	.42	.51	.42	.20	.75	.81	.74	.58	.61
29. FWS Mechanical	.22	.38	.27	.28	.27	.31	.34	.28	.27	.19	.16	.14	.22	.16	.07	.25	.26	.24	.13	.30
30. FWS Composite	.70	.75	.77	.77	.73	.66	.62	.62	.65	.61	.42	.52	.52	.44	.22	.69	.69	.57	.47	.46
31. ECT Holistic	.40	.52	.46	.48	.47	.30	.42	.34	.39	.26	.19	.31	.19	.22	.12	.40	.31	.27	.14	.29
32. FWS Holistic	.72	.76	.70	.75	.77	.54	.58	.48	.53	.45	.28	.35	.31	.29	.13	.55	.53	.43	.26	.32
33. Total Holistic	.64	.73	.66	.70	.71	.48	.57	.47	.52	.41	.26	.37	.29	.29	.14	.54	.48	.40	.23	.34
34. SAT-V	.35	.35	.37	.41	.43	.28	.21	.30	.35	.24	.15	.24	.16	.18	.03	.32	.25	.20	.12	.11
35. Vocabulary	.30	.33	.32	.35	.38	.25	.21	.30	.32	.22	.14	.21	.16	.15	.04	.30	.24	.15	.10	.07
36. Reading	.36	.34	.37	.42	.44	.29	.20	.28	.33	.25	.15	.24	.15	.18	.01	.32	.24	.23	.13	.14
37. SAT-M	.16	.22	.17	.20	.17	.14	.14	.05	.14	.12	.08	.15	.10	.12	.08	.22	.07	.02	.14	.00
38. TSWE	.28	.31	.31	.29	.29	.22	.24	.26	.29	.27	.27	.27	.16	.26	.09	.32	.24	.17	.12	.14
39. ECT Reported	.38	.45	.45	.43	.45	.35	.36	.34	.37	.31	.27	.30	.24	.25	.09	.42	.34	.25	.09	.25
40. ECT Objective	.33	.37	.38	.35	.38	.32	.28	.30	.31	.28	.27	.25	.24	.23	.07	.38	.31	.21	.06	.19

Table E-1. (Cont.).

Variable	Variable Number																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Statement of thesis	.34	.23	-.06	.03	.02	.74	.40	.42	.22	.70	.40	.72	.64	.35	.30	.36	.16	.28	.38	.33
2. Overall organization	.41	.33	-.17	.13	.13	.82	.33	.47	.38	.75	.52	.76	.73	.35	.33	.34	.22	.31	.45	.37
3. Rhetorical strategy	.36	.15	-.12	.10	.11	.82	.36	.54	.27	.77	.46	.70	.66	.37	.32	.37	.17	.31	.45	.38
4. Noteworthy ideas	.40	.24	-.15	.03	.03	.81	.32	.57	.28	.77	.48	.75	.70	.41	.35	.42	.20	.29	.43	.35
5. Supporting material	.41	.24	-.15	.03	.00	.81	.28	.48	.27	.73	.47	.77	.71	.43	.38	.44	.17	.29	.45	.38
6. Tone and attitude	.29	.17	-.20	.11	.14	.69	.32	.49	.31	.66	.30	.54	.48	.28	.25	.29	.14	.22	.35	.32
7. Paragraphing and transition	.27	.33	-.13	.13	.14	.65	.38	.37	.34	.62	.42	.58	.57	.21	.21	.20	.14	.24	.36	.28
8. Sentence variety	.21	.12	-.22	.10	.20	.61	.41	.47	.28	.62	.34	.48	.47	.30	.30	.28	.05	.26	.34	.30
9. Sentence logic	.22	.17	-.25	.05	.12	.61	.47	.51	.27	.65	.39	.53	.52	.35	.32	.33	.14	.29	.37	.31
10. Pronoun usage	.16	.15	-.02	.11	.17	.45	.79	.52	.19	.61	.26	.45	.41	.24	.22	.25	.12	.27	.31	.28
11. Subject-verb agreement	.05	.13	-.13	.04	.10	.25	.70	.41	.16	.42	.19	.28	.26	.15	.14	.15	.08	.27	.27	.27
12. Parallel structure	.18	.11	-.10	.02	.03	.39	.67	.42	.14	.52	.31	.35	.37	.24	.21	.24	.15	.27	.30	.25
13. Idiomatic usage	.06	.08	-.22	.12	.19	.38	.64	.51	.22	.52	.19	.31	.29	.16	.16	.15	.10	.16	.24	.24
14. Punctuation	.06	.11	-.17	.02	.14	.25	.75	.42	.16	.44	.22	.29	.29	.18	.15	.18	.12	.26	.25	.23
15. Use of modifiers	.03	.02	-.08	.04	.06	.14	.36	.20	.07	.22	.12	.13	.14	.03	.04	.01	.08	.09	.09	.07
16. Level of diction	.27	.12	-.21	.07	.11	.57	.50	.75	.25	.69	.40	.55	.54	.32	.30	.32	.22	.32	.42	.38
17. Range of vocabulary	.26	.14	-.18	.06	.17	.56	.52	.81	.26	.69	.31	.53	.48	.25	.24	.24	.07	.24	.34	.31
18. Precision of diction	.07	.09	-.28	.12	.17	.44	.41	.74	.24	.57	.27	.43	.40	.20	.15	.23	.02	.17	.25	.21
19. Figurative language	.11	.05	-.05	.06	.14	.36	.37	.58	.13	.47	.14	.26	.23	.12	.10	.13	.14	.12	.09	.06
20. Spelling (rating)	.17	.12	-.49	.04	.12	.33	.41	.61	.30	.46	.29	.32	.34	.11	.07	.14	.00	.14	.25	.19
21. Essay length	1.00	.52	-.10	.12	.03	.45	.14	.25	.56	.40	.51	.50	.57	.23	.20	.24	.14	.16	.38	.25
22. Paragraphs	.52	1.00	-.05	.21	.18	.31	.16	.15	.68	.28	.37	.28	.36	.12	.12	.11	.03	.12	.30	.23
23. Spelling errors (count)	-.10	-.05	1.00	.01	-.05	-.22	-.18	-.35	-.40	-.28	-.23	-.23	-.26	-.14	-.11	-.14	-.01	-.14	-.24	-.21
24. Handwriting	.12	.21	.01	1.00	.68	.10	.09	.10	.66	.11	.16	.06	.12	-.06	-.07	-.04	-.14	.04	.12	.07
25. Neatness	.03	.18	-.05	.68	1.00	.12	.18	.20	.65	.17	.20	.08	.16	-.03	-.06	-.02	-.04	.07	.15	.10
26. FWS Discourse	.45	.31	-.22	.10	.12	1.00	.47	.65	.40	.94	.58	.90	.84	.46	.41	.46	.21	.37	.54	.45
27. FWS Syntactic	.14	.16	-.18	.09	.18	.47	1.00	.63	.24	.70	.33	.46	.45	.26	.24	.26	.16	.34	.38	.35
28. FWS Lexical	.25	.15	-.35	.10	.20	.65	.63	1.00	.34	.83	.41	.60	.58	.29	.25	.31	.12	.28	.39	.34
29. FWS Mechanical	.56	.68	-.40	.66	.65	.40	.24	.34	1.00	.41	.49	.37	.48	.13	.10	.15	.00	.18	.40	.30
30. FWS Composite	.40	.28	-.28	.11	.17	.94	.70	.83	.41	1.00	.57	.86	.81	.44	.39	.44	.21	.39	.55	.47
31. ECT Holistic	.51	.37	-.23	.16	.20	.58	.33	.41	.49	.57	1.00	.58	.88	.56	.52	.54	.35	.57	.79	.58
32. FWS Holistic	.50	.28	-.23	.06	.08	.90	.46	.60	.37	.86	.58	1.00	.90	.44	.39	.45	.17	.38	.54	.45
33. Total Holistic	.57	.36	-.26	.12	.16	.84	.45	.58	.38	.81	.88	.90	1.00	.56	.51	.56	.29	.53	.74	.58
34. SAT-V	.23	.12	-.14	-.06	-.03	.46	.26	.29	.13	.44	.56	.44	.56	1.00	.95	.96	.51	.68	.71	.70
35. Vocabulary	.20	.12	-.11	-.07	-.06	.41	.24	.25	.10	.39	.52	.39	.51	.95	1.00	.82	.48	.66	.69	.68
36. Reading	.24	.11	-.14	-.04	-.02	.46	.26	.31	.15	.44	.54	.45	.56	.96	.82	1.00	.51	.65	.67	.65
37. SAT-M	.14	.03	-.01	-.14	-.04	.21	.16	.12	.00	.21	.35	.17	.29	.51	.48	.51	1.00	.52	.46	.45
38. TSWE	.16	.12	-.14	.04	.07	.37	.34	.28	.18	.39	.57	.38	.53	.68	.66	.65	.52	1.00	.77	.76
39. ECT Reported	.38	.30	-.24	.12	.15	.54	.38	.39	.40	.55	.79	.54	.74	.71	.69	.67	.46	.77	1.00	.95
40. ECT Objective	.25	.23	-.21	.07	.10	.45	.35	.34	.30	.47	.58	.45	.58	.70	.68	.65	.45	.76	.95	1.00

Table E-2. Matrix of Intercorrelations for Blacks Who Reported That English Was Their Best Language

Variable	Variable Number																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Statement of thesis	1.00	.58	.41	.48	.49	.27	.32	.35	.45	.33	.37	.17	.34	.21	.02	.33	.24	.34	.15	.06
2. Overall organization	.58	1.00	.61	.49	.50	.38	.50	.33	.36	.34	.32	.22	.31	.24	.16	.35	.28	.48	.32	.23
3. Rhetorical strategy	.41	.61	1.00	.51	.50	.51	.46	.41	.37	.24	.21	.26	.30	.12	.19	.33	.26	.40	.23	.18
4. Noteworthy ideas	.48	.49	.51	1.00	.65	.41	.36	.30	.35	.27	.25	.14	.29	.11	.26	.41	.41	.33	.23	.16
5. Supporting material	.49	.50	.50	.65	1.00	.38	.38	.31	.34	.19	.20	.19	.22	.11	.14	.36	.31	.35	.25	.12
6. Tone and attitude	.27	.38	.51	.41	.38	1.00	.34	.34	.28	.32	.17	.18	.26	.03	.21	.33	.23	.31	.17	.18
7. Paragraphing and transition	.32	.50	.46	.36	.38	.34	1.00	.33	.33	.16	.13	.27	.34	.24	.10	.27	.24	.32	.24	.14
8. Sentence variety	.35	.33	.41	.30	.31	.34	.33	1.00	.49	.35	.25	.38	.42	.25	.23	.42	.51	.36	.33	.08
9. Sentence logic	.45	.36	.37	.35	.34	.28	.33	.49	1.00	.44	.32	.23	.49	.23	.14	.36	.27	.40	.17	.05
10. Pronoun usage	.33	.34	.24	.27	.19	.32	.16	.35	.44	1.00	.48	.28	.41	.24	.25	.45	.36	.35	.28	.16
11. Subject-verb agreement	.37	.32	.21	.25	.20	.17	.13	.25	.32	.48	1.00	.22	.39	.33	.18	.31	.21	.33	.22	.24
12. Parallel structure	.17	.22	.26	.14	.19	.18	.27	.38	.23	.28	.22	1.00	.31	.25	.17	.18	.26	.28	.32	.11
13. Idiomatic usage	.34	.31	.30	.29	.22	.26	.34	.42	.49	.41	.39	.31	1.00	.25	.31	.32	.34	.44	.25	.13
14. Punctuation	.21	.24	.12	.11	.11	.03	.24	.25	.23	.24	.33	.25	.25	1.00	.09	.27	.25	.18	.28	.21
15. Use of modifiers	.02	.16	.19	.26	.14	.21	.10	.23	.14	.25	.18	.17	.31	.09	1.00	.22	.32	.31	.25	.21
16. Level of diction	.33	.35	.33	.41	.36	.33	.27	.42	.36	.45	.31	.18	.32	.27	.22	1.00	.54	.46	.30	.28
17. Range of vocabulary	.24	.28	.26	.41	.31	.23	.24	.51	.27	.36	.21	.26	.34	.25	.32	.54	1.00	.44	.38	.28
18. Precision of diction	.34	.48	.40	.33	.35	.31	.32	.36	.40	.35	.33	.28	.44	.18	.31	.46	.44	1.00	.37	.25
19. Figurative language	.15	.32	.23	.23	.25	.17	.24	.33	.17	.28	.22	.32	.25	.28	.25	.30	.38	.37	1.00	.26
20. Spelling (rating)	.06	.23	.18	.16	.12	.18	.14	.08	.05	.16	.24	.11	.13	.21	.21	.28	.28	.25	.24	1.00
21. Essay length	.22	.27	.25	.34	.32	.13	.19	.12	.10	.08	.13	.12	.01	.09	.17	.20	.13	.18	.22	.19
22. Paragraphs	.14	.29	.26	.16	.15	.15	.31	.09	.18	.02	.12	.09	.19	.00	.01	-.04	-.03	.08	.11	.04
23. Spelling errors (count)	.02	-.14	-.13	-.05	-.05	.00	-.13	-.11	.07	-.03	-.12	-.11	-.05	-.17	-.14	-.16	-.21	-.16	-.06	-.50
24. Handwriting	.01	-.02	.07	-.08	-.09	.02	-.01	.07	-.02	.04	.11	.01	.01	.08	-.05	-.04	.03	-.02	-.02	.03
25. Neatness	-.01	.01	.02	-.01	-.04	.04	.05	.11	.02	.06	.16	-.01	.08	.04	.06	.05	.12	.05	-.09	.14
26. FWS Discourse	.72	.78	.76	.74	.75	.58	.64	.59	.60	.40	.36	.31	.46	.24	.21	.50	.43	.50	.34	.19
27. FWS Syntactic	.41	.43	.33	.34	.27	.30	.32	.48	.51	.73	.74	.52	.70	.62	.43	.48	.44	.49	.40	.28
28. FWS Lexical	.33	.48	.41	.45	.40	.36	.36	.49	.37	.46	.38	.32	.44	.33	.38	.75	.77	.76	.60	.59
29. FWS Mechanical	.10	.23	.24	.13	.11	.12	.24	.18	.06	.08	.22	.12	.13	.13	.11	.08	.15	.14	.10	.31
30. FWS Composite	.66	.74	.69	.69	.67	.55	.59	.63	.62	.56	.51	.41	.58	.39	.34	.64	.59	.65	.48	.35
31. ECT Holistic	.42	.40	.35	.38	.33	.25	.26	.38	.30	.23	.36	.16	.25	.26	.11	.36	.33	.33	.14	.19
32. FWS Holistic	.64	.69	.63	.67	.62	.42	.46	.48	.54	.42	.49	.27	.43	.35	.21	.55	.42	.48	.28	.23
33. Total Holistic	.60	.62	.56	.60	.54	.38	.41	.49	.48	.37	.48	.24	.39	.35	.18	.52	.42	.46	.24	.23
34. SAT-V	.43	.43	.33	.40	.40	.25	.20	.32	.30	.17	.33	.08	.31	.14	.20	.33	.28	.37	.16	.10
35. Vocabulary	.40	.40	.30	.37	.38	.20	.18	.28	.28	.12	.28	.04	.28	.11	.16	.30	.24	.31	.14	.11
36. Reading	.42	.41	.33	.38	.40	.27	.20	.33	.30	.20	.35	.11	.31	.16	.21	.33	.29	.39	.18	.09
37. SAT-M	.19	.26	.22	.21	.28	.14	.18	.22	.19	.07	.20	-.04	.22	.03	.04	.15	.10	.18	.02	.02
38. TSWE	.35	.43	.29	.34	.34	.27	.24	.26	.29	.21	.41	.11	.25	.13	.04	.32	.23	.32	.02	.09
39. ECT Reported	.42	.44	.36	.40	.39	.28	.31	.41	.38	.24	.36	.14	.26	.24	.10	.42	.36	.38	.11	.16
40. ECT Objective	.34	.37	.29	.33	.34	.24	.28	.35	.34	.20	.30	.10	.22	.18	.06	.37	.30	.33	.06	.12

Table E-2. (Cont.).

Variable	Variable Number																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Statement of Thesis	.22	.14	.02	.01	-.01	.72	.41	.33	.10	.66	.42	.64	.60	.43	.40	.42	.19	.35	.42	.34
2. Overall organization	.27	.29	-.14	-.02	.01	.78	.43	.48	.23	.74	.40	.69	.62	.43	.40	.41	.26	.43	.44	.37
3. Rhetorical strategy	.25	.26	-.13	.07	.02	.76	.33	.41	.24	.69	.35	.63	.56	.33	.30	.33	.22	.29	.36	.29
4. Noteworthy ideas	.34	.16	-.05	-.08	-.01	.74	.34	.45	.13	.69	.38	.67	.60	.40	.37	.38	.21	.33	.40	.33
5. Supporting material	.32	.15	-.05	-.09	-.04	.75	.27	.40	.11	.67	.33	.62	.54	.40	.38	.40	.28	.34	.39	.34
6. Tone and attitude	.15	.15	.00	.02	.04	.58	.30	.36	.12	.55	.25	.42	.38	.25	.20	.27	.14	.27	.28	.24
7. Paragraphing and transition	.19	.31	-.13	-.01	.05	.64	.32	.36	.24	.59	.26	.46	.41	.20	.18	.20	.18	.24	.31	.28
8. Sentence variety	.12	.09	-.11	.07	.11	.59	.48	.49	.18	.63	.38	.48	.49	.32	.28	.33	.22	.26	.41	.35
9. Sentence logic	.10	.18	.07	-.02	.02	.60	.51	.37	.06	.62	.30	.54	.48	.30	.28	.30	.19	.29	.38	.34
10. Pronoun usage	.08	.02	-.03	.04	.06	.40	.73	.46	.08	.56	.23	.42	.37	.17	.12	.20	.07	.21	.24	.20
11. Subject-verb agreement	.13	.12	-.12	.11	.16	.36	.74	.38	.22	.51	.36	.49	.48	.33	.28	.35	.20	.41	.36	.30
12. Parallel structure	.12	.09	-.11	.01	-.01	.31	.52	.32	.12	.41	.16	.27	.24	.08	.04	.11	-.04	.11	.14	.10
13. Idiomatic usage	.01	.19	-.05	.01	.08	.46	.70	.44	.13	.58	.25	.43	.39	.21	.28	.31	.22	.25	.26	.22
14. Punctuation	.09	.00	-.17	.08	.04	.24	.62	.33	.13	.39	.26	.35	.35	.14	.11	.16	.03	.13	.24	.18
15. Use of modifiers	.17	.01	-.14	.05	.06	.21	.43	.38	.11	.34	.11	.21	.18	.20	.16	.21	.04	.04	.10	.06
16. Level of diction	.20	-.04	-.16	-.04	.05	.50	.48	.75	.08	.64	.36	.55	.52	.33	.30	.3[illegible]	.15	.32	.42	.37
17. Range of vocabulary	.13	-.03	-.21	.03	.12	.43	.44	.77	.15	.59	.33	.42	.42	.28	.24	.2[illegible]	.10	.23	.36	.30
18. Precision of diction	.18	.08	-.16	-.02	.05	.50	.49	.76	.14	.65	.33	.48	.46	.37	.31	.39	.1[illegible]	.32	.38	.33
19. Figurative language	.22	.11	-.06	-.02	-.09	.34	.40	.60	.10	.48	.14	.28	.24	.16	.14	.18	.02	.02	.11	.06
20. Spelling (rating)	.19	.04	-.50	.03	.14	.19	.28	.59	.31	.35	.19	.23	.23	.10	.11	.09	.02	.09	.16	.12
21. Essay length	1.00	.35	-.03	.03	-.02	.32	.15	.25	.41	.31	.42	.44	.48	.25	.24	.23	.01	.20	.26	.11
22. Paragraphs	.35	1.00	.06	.09	.04	.27	.12	.04	.54	.22	.19	.22	.23	.12	.15	.09	.08	.12	.13	.07
23. Spelling errors (count)	-.03	.06	1.00	-.13	-.18	.09	-.16	-.32	-.48	-.18	-.26	-.17	-.23	-.07	-.06	-.07	-.05	-.10	.22	-.16
24. Handwriting	.03	.09	-.13	1.00	.63	-.02	.07	-.01	.69	.00	.05	.03	.04	-.10	-.10	-.09	-.14	-.06	.00	-.03
25. Neatness	-.02	.04	-.18	.63	1.00	.02	.11	.09	.65	.06	.17	.05	.12	-.05	-.06	-.03	-.06	-.01	.13	.08
26. PWS Discourse	.32	.27	.09	-.02	.02	1.00	.53	.57	.22	.94	.50	.83	.76	.48	.45	.48	.31	.44	.53	.44
27. PWS Syntactic	.15	.12	.16	.07	.11	.53	1.00	.60	.21	.74	.38	.59	.55	.33	.27	.36	.15	.33	.37	.30
28. PWS Lexical	.25	.04	.32	-.01	.09	.57	.60	1.00	.23	.78	.40	.57	.55	.37	.33	.38	.15	.30	.43	.36
29. PWS Mechanical	.41	.54	-.48	.69	.65	.22	.21	.23	1.00	.26	.37	.28	.36	.09	.09	.08	-.02	.11	.24	.12
30. PWS Composite	.31	.22	.18	.00	.06	.94	.74	.78	.26	1.00	.53	.84	.78	.49	.45	.50	.28	.45	.55	.46
31. ECT Holistic	.42	.19	.26	.05	.17	.50	.38	.40	.37	.53	1.00	.59	.88	.54	.51	.52	.29	.51	.76	.49
32. PWS Holistic	.44	.22	.17	.03	.05	.83	.59	.57	.28	.84	.59	1.00	.91	.55	.51	.55	.32	.52	.61	.51
33. Total Holistic	.48	.23	.23	.04	.12	.76	.55	.55	.36	.78	.88	.91	1.00	.61	.57	.60	.34	.57	.76	.56
34. SAT-V	.25	.12	.07	-.10	-.05	.48	.33	.37	.09	.49	.54	.55	.61	1.00	.94	.95	.59	.77	.74	.71
35. Vocabulary	.24	.15	.06	-.10	-.06	.45	.27	.33	.09	.45	.51	.51	.57	.94	1.00	.79	.57	.74	.70	.68
36. Reading	.23	.09	.07	-.09	-.03	.48	.36	.38	.08	.50	.52	.55	.60	.95	.79	1.00	.56	.72	.69	.66
37. SAT-M	.01	.08	.05	-.14	-.06	.31	.15	.15	-.02	.28	.29	.32	.34	.59	.57	.56	1.00	.54	.50	.53
38. TSWE	.20	.12	.10	-.06	-.01	.44	.33	.30	.11	.45	.51	.52	.57	.77	.74	.72	.54	1.00	.79	.79
39. ECT Reported	.26	.13	.22	.00	.13	.53	.37	.43	.24	.55	.76	.61	.76	.74	.70	.69	.50	.79	1.00	.94
40. ECT Objective	.11	.07	-.16	-.03	.08	.44	.30	.36	.12	.46	.49	.51	.56	.71	.68	.66	.53	.79	.94	1.00

Table E-3. Matrix of Intercorrelations for Hispanics Who Reported That English Was Their Best Language

Variable	Variable Number																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Statement of thesis	1.00	.60	.55	.51	.51	.36	.36	.40	.39	.20	.18	.13	.11	.09	.07	.30	.20	.23	.24	.23
2. Overall organization	.60	1.00	.61	.42	.52	.29	.49	.37	.37	.19	.19	.17	.16	.20	.06	.41	.23	.30	.18	.15
3. Rhetorical strategy	.55	.61	1.00	.55	.55	.41	.50	.45	.47	.20	.11	.17	.24	.16	.12	.44	.32	.29	.31	.21
4. Noteworthy ideas	.51	.42	.55	1.00	.68	.46	.39	.35	.34	.19	.12	.13	.21	.04	.10	.29	.32	.26	.20	.13
5. Supporting material	.51	.52	.55	.68	1.00	.33	.42	.31	.22	.24	.11	.17	.16	.08	.08	.24	.29	.28	.23	.16
6. Tone and attitude	.36	.29	.41	.46	.33	1.00	.35	.39	.32	.15	.15	.19	.18	.02	.16	.27	.26	.26	.31	.11
7. Paragraphing and transition	.36	.49	.50	.39	.42	.35	1.00	.40	.46	.16	.12	.15	.18	.12	0	.32	.29	.34	.09	.10
8. Sentence variety	.40	.37	.45	.35	.31	.39	.40	1.00	.47	.26	.26	.24	.32	.23	.21	.38	.41	.32	.28	.28
9. Sentence logic	.39	.37	.46	.34	.22	.32	.46	.47	1.00	.19	.17	.21	.24	.21	.14	.41	.30	.37	.19	.16
10. Pronoun usage	.20	.19	.20	.19	.24	.15	.16	.26	.19	1.00	.41	.24	.29	.35	.18	.33	.27	.22	.10	.32
11. Subject-verb agreement	.18	.19	.11	.12	.11	.15	.12	.26	.17	.41	1.00	.21	.19	.27	0	.25	.22	.20	.01	.27
12. Parallel structure	.13	.17	.17	.13	.17	.19	.15	.24	.21	.24	.21	1.00	.15	.14	.38	.22	.25	.25	.19	-.03
13. Idiomatic usage	.11	.16	.24	.21	.16	.18	.18	.32	.24	.29	.19	.15	1.00	.25	.14	.35	.25	.24	.04	.18
14. Punctuation	.09	.20	.16	.04	.08	.02	.12	.23	.21	.35	.27	.14	.25	1.00	.17	.19	.16	.19	.12	.20
15. Use of modifiers	.07	.06	.12	.10	.08	.16	0	.21	.14	.18	0	.38	.14	.17	1.00	.13	.19	.08	.24	0
16. Level of diction	.30	.41	.44	.29	.24	.27	.32	.38	.41	.33	.25	.22	.35	.19	.13	1.00	.42	.41	.22	.23
17. Range of vocabulary	.20	.23	.32	.32	.29	.26	.29	.41	.30	.27	.22	.25	.25	.16	.19	.42	1.00	.53	.24	.19
18. Precision of diction	.23	.30	.29	.26	.28	.26	.34	.32	.37	.22	.20	.25	.24	.19	.08	.41	.53	1.00	.23	.17
19. Figurative language	.24	.18	.31	.20	.23	.31	.09	.28	.19	.10	.01	.19	.04	.12	.24	.22	.24	.23	1.00	.16
20. Spelling (rating)	.20	.15	.21	.13	.16	.11	.10	.28	.16	.32	.27	-.03	.18	.20	0	.23	.19	.17	.16	1.00
21. Essay length	.33	.29	.30	.39	.39	.25	.24	.21	.14	.06	.01	.09	-.01	-.06	.20	.03	.11	-.02	.16	-.02
22. Paragraphs	.25	.36	.17	.12	.24	.21	.33	.20	.18	.01	.08	.08	.02	.10	.12	.14	-.01	.04	.11	-.04
23. Spelling errors (count)	-.15	-.13	-.12	-.06	-.09	-.11	-.11	-.13	-.06	-.15	-.17	-.04	-.23	-.22	.05	-.17	-.14	-.16	-.14	-.48
24. Handwriting	.15	.08	-.01	.05	.02	.02	.07	.01	-.01	.02	-.08	-.08	-.08	-.01	-.08	-.05	.02	0	-.04	.05
25. Neatness	.17	.10	.06	.08	.06	.05	.10	.06	.05	.02	.05	.03	-.04	.06	-.07	.05	.07	.08	-.02	.05
26. FWS Discourse	.75	.75	.80	.77	.74	.59	.66	.61	.60	.28	.21	.23	.26	.17	.15	.47	.40	.40	.32	.23
27. FWS Syntactic	.22	.28	.28	.22	.24	.22	.22	.42	.32	.74	.64	.51	.60	.64	.37	.43	.37	.34	.16	.31
28. FWS Lexical	.35	.39	.48	.37	.37	.36	.36	.51	.44	.39	.30	.27	.34	.27	.18	.71	.75	.74	.51	.55
29. FWS Mechanical	.37	.36	.22	.24	.29	.23	.33	.22	.15	.09	.14	.05	.05	.12	.03	.13	.10	.09	.13	.20
30. FWS Composite	.68	.70	.76	.70	.68	.57	.62	.66	.62	.45	.36	.34	.39	.32	.23	.60	.55	.54	.39	.37
31. ECT Holistic	.44	.42	.44	.42	.47	.25	.34	.39	.33	.21	.21	.16	.21	.18	.26	.31	.20	.26	.18	.17
32. FWS Holistic	.68	.71	.69	.68	.69	.45	.55	.52	.52	.33	.22	.19	.30	.17	.16	.51	.36	.37	.26	.28
33. Total Holistic	.63	.64	.64	.62	.65	.40	.50	.51	.48	.31	.24	.20	.29	.20	.23	.46	.32	.35	.25	.26
34. SAT-V	.33	.38	.32	.38	.44	.19	.30	.31	.28	.20	.23	.13	.18	.15	.08	.31	.19	.29	.14	.21
35. Vocabulary	.28	.33	.28	.34	.41	.17	.27	.27	.25	.20	.21	.13	.18	.16	.08	.26	.18	.26	.13	.18
36. Reading	.34	.38	.33	.38	.43	.19	.30	.32	.28	.20	.23	.13	.15	.12	.08	.32	.19	.29	.15	.21
37. SAT-M	.26	.24	.21	.32	.36	.09	.17	.13	.21	.10	.14	.05	.11	.14	.02	.18	.10	.13	.01	.09
38. TSWE	.35	.37	.36	.33	.38	.22	.34	.35	.33	.17	.20	.07	.22	.17	.09	.32	.21	.28	.09	.20
39. ECT Reported	.42	.41	.42	.44	.47	.26	.40	.38	.36	.17	.26	.08	.22	.18	.14	.32	.24	.33	.14	.19
40. ECT Objective	.33	.34	.34	.37	.39	.22	.37	.30	.32	.11	.24	.18	.18	.15	.05	.27	.22	.32	.08	.17

Table E-3. (Cont.).

Variable	Variable Number																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Statement of thesis	.33	.25	-.15	.15	.17	.75	.22	.35	.37	.68	.44	.68	.63	.33	.28	.34	.26	.35	.42	.33
2. Overall organization	.29	.36	.13	.08	.10	.75	.28	.39	.36	.70	.42	.71	.64	.38	.33	.38	.24	.37	.41	.34
3. Rhetorical strategy	.30	.17	-.12	0	.06	.80	.28	.48	.22	.76	.44	.69	.64	.32	.28	.33	.21	.36	.42	.34
4. Noteworthy ideas	.39	.12	-.06	.05	.08	.77	.22	.37	.24	.70	.42	.68	.62	.38	.34	.38	.32	.33	.44	.37
5. Supporting material	.39	.24	-.09	.02	.06	.74	.24	.37	.29	.68	.47	.69	.65	.44	.41	.43	.36	.38	.47	.39
6. Tone and attitude	.25	.21	-.11	.02	.05	.59	.22	.36	.23	.57	.25	.45	.40	.19	.17	.19	.09	.22	.26	.22
7. Paragraphing and transition	.24	.33	-.11	.07	.10	.66	.22	.36	.33	.62	.34	.55	.50	.30	.27	.30	.17	.34	.40	.37
8. Sentence variety	.21	.20	-.13	.01	.06	.61	.42	.51	.22	.66	.40	.52	.51	.31	.27	.32	.13	.35	.38	.30
9. Sentence logic	.14	.18	-.06	-.01	.05	.60	.32	.44	.15	.62	.33	.52	.48	.28	.25	.28	.21	.33	.36	.32
10. Pronoun usage	.06	.01	-.15	.02	.02	.28	.74	.39	.09	.45	.21	.33	.31	.20	.20	.20	.10	.17	.17	.11
11. Subject-verb agreement	.01	.08	-.17	.08	.05	.21	.64	.30	.14	.36	.21	.22	.24	.23	.20	.23	.14	.20	.26	.24
12. Parallel structure	.09	.08	-.04	-.08	.03	.23	.51	.27	.05	.34	.16	.19	.20	.13	.13	.13	.05	.07	.08	.02
13. Idiomatic usage	-.01	.02	-.23	-.08	-.04	.26	.60	.34	.05	.39	.21	.30	.29	.18	.18	.15	.11	.22	.22	.18
14. Punctuation	-.06	.10	-.22	-.01	.06	.17	.64	.27	.12	.32	.18	.17	.20	.15	.16	.12	.14	.17	.18	.15
15. Use of modifiers	.20	.12	.05	-.08	-.07	.15	.37	.18	.03	.23	.26	.16	.23	.08	.08	.08	.02	.09	.14	.05
16. Level of diction	.03	.14	-.17	-.05	.05	.47	.43	.71	.13	.60	.31	.51	.46	.31	.26	.32	.18	.32	.32	.27
17. Range of vocabulary	.11	-.01	-.14	.02	.07	.40	.37	.75	.10	.55	.20	.36	.32	.19	.18	.19	.10	.21	.24	.22
18. Precision of diction	-.02	.04	-.16	0	.08	.40	.34	.74	.09	.54	.26	.37	.35	.29	.26	.29	.13	.28	.33	.32
19. Figurative language	.16	.11	-.14	-.04	-.02	.32	.16	.51	.13	.39	.18	.26	.25	.14	.13	.15	.01	.09	.14	.08
20. Spelling (rating)	-.02	-.04	-.48	.05	.05	.23	.31	.55	.20	.37	.17	.28	.26	.21	.18	.21	.09	.20	.19	.17
21. Essay length	1.00	.45	.24	.09	.01	.42	.05	.07	.46	.34	.41	.47	.49	.30	.29	.29	.12	.19	.33	.22
22. Paragraphs	.45	1.00	.13	.06	0	.30	.10	.06	.56	.26	.31	.29	.33	.18	.17	.18	.11	.23	.23	.15
23. Spelling errors (count)	.24	.13	1.00	-.07	-.17	-.15	-.24	-.34	-.35	-.24	-.10	-.15	-.14	-.17	-.17	-.14	-.09	-.18	-.13	-.13
24. Handwriting	.09	.06	-.07	1.00	.63	.07	-.02	0	.66	.04	.07	.08	.08	.02	0	.03	0	.07	.07	.06
25. Neatness	.01	0	-.17	.63	1.00	.13	.02	.08	.64	.12	.14	.13	.15	.06	.05	.06	.01	.02	.11	.08
26. FWS Discourse	.42	.30	-.15	.07	.13	1.00	.37	.55	.38	.95	.56	.88	.81	.46	.41	.46	.32	.48	.57	.47
27. FWS Syntactic	.05	.10	-.24	-.02	.02	.37	1.00	.50	.14	.59	.33	.39	.40	.28	.28	.26	.17	.27	.30	.23
28. FWS Lexical	.07	.06	-.34	.00	.08	.55	.50	1.00	.20	.75	.34	.55	.50	.35	.31	.36	.16	.35	.38	.33
29. FWS Mechanical	.46	.56	-.35	.66	.64	.38	.14	.20	1.00	.36	.37	.40	.43	.27	.25	.26	.11	.26	.32	.23
30. FWS Composite	.34	.26	-.24	.04	.12	.95	.59	.75	.36	1.00	.56	.86	.80	.48	.44	.48	.31	.49	.57	.47
31. ECT Holistic	.41	.31	-.10	.07	.14	.56	.33	.34	.37	.56	1.00	.63	.89	.57	.52	.55	.33	.55	.77	.50
32. FWS Holistic	.47	.29	-.15	.08	.13	.88	.39	.55	.40	.86	.63	1.00	.92	.55	.49	.55	.33	.52	.62	.50
33. Total Holistic	.49	.33	-.14	.08	.13	.81	.40	.50	.43	.80	.89	.92	1.00	.62	.56	.61	.37	.59	.76	.55
34. SAT-V	.30	.18	-.17	.02	.06	.46	.28	.35	.27	.48	.57	.55	.62	1.00	.94	.95	.63	.75	.80	.78
35. Vocabulary	.29	.17	-.17	0	.05	.41	.28	.31	.25	.44	.52	.49	.56	.94	1.00	.79	.58	.68	.72	.71
36. Reading	.29	.18	-.14	.03	.06	.46	.26	.36	.26	.48	.55	.55	.61	.95	.79	1.00	.60	.74	.77	.75
37. SAT-M	.12	.11	-.09	0	.01	.32	.17	.16	.11	.31	.33	.33	.37	.63	.58	.60	1.00	.56	.58	.61
38. TSWE	.19	.23	-.18	.07	.02	.48	.27	.35	.26	.49	.55	.52	.59	.75	.68	.74	.56	1.00	.82	.82
39. ECT Reported	.33	.23	-.13	.07	.11	.57	.30	.38	.32	.57	.77	.62	.76	.80	.72	.77	.58	.82	1.00	.94
40. ECT Objective	.22	.15	-.12	.06	.08	.47	.23	.33	.23	.47	.50	.50	.55	.78	.71	.75	.61	.82	.94	1.00

Table E-4. Matrix of Intercorrelations for Hispanics Who Reported That English Was Not Their Best Language

Variable	Variable Number																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Statement of thesis	1.00	.62	.51	.54	.55	.30	.34	.28	.43	.28	.32	.13	.29	.20	.10	.36	.35	.25	.30	.26
2. Overall organization	.62	1.00	.67	.54	.47	.42	.47	.43	.37	.30	.32	.22	.24	.32	.20	.33	.41	.28	.35	.27
3. Rhetorical strategy	.51	.67	1.00	.50	.47	.46	.35	.54	.45	.24	.29	.20	.24	.23	.17	.42	.43	.25	.35	.31
4. Noteworthy ideas	.54	.54	.50	1.00	.71	.42	.24	.39	.37	.20	.22	.11	.22	.16	.08	.28	.42	.26	.30	.16
5. Supporting material	.55	.47	.47	.71	1.00	.34	.21	.27	.37	.18	.12	.07	.15	.13	-.02	.31	.37	.21	.30	.18
6. Tone and attitude	.30	.42	.46	.42	.34	1.00	.31	.37	.31	.14	.28	.22	.25	.20	.15	.42	.45	.29	.40	.13
7. Paragraphing and transition	.34	.47	.35	.24	.21	.31	1.00	.39	.34	.31	.32	.34	.26	.38	.17	.35	.34	.33	.30	.27
8. Sentence variety	.28	.43	.54	.39	.27	.37	.39	1.00	.47	.34	.38	.39	.34	.36	.37	.46	.46	.37	.42	.31
9. Sentence logic	.43	.37	.45	.37	.37	.31	.34	.47	1.00	.37	.37	.24	.46	.30	.19	.42	.42	.34	.22	.34
10. Pronoun usage	.28	.30	.24	.20	.18	.14	.31	.34	.37	1.00	.69	.46	.48	.53	.25	.43	.33	.48	.32	.33
11. Subject-verb agreement	.32	.32	.29	.22	.12	.28	.32	.38	.37	.69	1.00	.39	.58	.47	.23	.54	.44	.53	.33	.37
12. Parallel structure	.13	.22	.20	.11	.07	.22	.34	.39	.24	.46	.39	1.00	.37	.36	.52	.42	.31	.46	.35	.30
13. Idiomatic usage	.29	.24	.24	.22	.15	.25	.26	.34	.46	.48	.58	.37	1.00	.27	.37	.49	.41	.57	.25	.34
14. Punctuation	.20	.32	.23	.16	.13	.20	.38	.36	.30	.53	.47	.36	.27	1.00	.26	.34	.34	.34	.36	.41
15. Use of modifiers	.10	.20	.17	.08	-.02	.15	.17	.37	.19	.25	.23	.52	.37	.26	1.00	.27	.20	.37	.28	.22
16. Level of diction	.36	.33	.42	.28	.31	.42	.35	.46	.42	.43	.54	.42	.49	.34	.27	1.00	.58	.61	.31	.30
17. Range of vocabulary	.35	.41	.43	.42	.37	.45	.34	.46	.42	.33	.44	.31	.41	.34	.20	.58	1.00	.50	.44	.28
18. Precision of diction	.25	.28	.25	.26	.21	.29	.33	.37	.34	.48	.53	.46	.57	.34	.37	.61	.50	1.00	.37	.32
19. Figurative language	.30	.35	.35	.30	.30	.40	.30	.42	.22	.32	.33	.35	.25	.36	.28	.31	.44	.37	1.00	.27
20. Spelling (rating)	.26	.27	.31	.16	.18	.13	.27	.31	.34	.33	.37	.30	.34	.41	.22	.30	.28	.32	.27	1.00
21. Essay length	.18	.16	.20	.25	.20	.16	.19	.22	.07	-.07	0	.02	.08	-.11	.09	.01	.14	-.05	.15	.02
22. Paragraphs	.09	.20	.13	.03	.01	.02	.23	.06	-.06	.03	0	-.02	-.09	.04	.01	0	.01	-.03	.06	0
23. Spelling errors	-.06	-.02	-.15	.11	.03	-.05	-.12	-.10	-.14	-.10	-.17	-.06	-.13	-.12	.02	-.10	-.09	-.16	-.04	-.41
24. Handwriting	.02	.07	.02	.14	.15	.06	.20	.11	.15	.16	.19	.09	.15	.17	.17	.07	.19	.17	.16	.14
25. Neatness	.11	.15	.09	.17	.11	.08	.07	.08	.15	.05	.07	.01	.09	.15	.04	-.01	.16	.06	.23	.12
26. FWS Discourse	.75	.79	.78	.76	.72	.58	.56	.64	.64	.37	.42	.29	.38	.35	.20	.53	.37	.40	.46	.36
27. FWS Syntactic	.33	.37	.33	.24	.16	.29	.42	.49	.47	.83	.84	.65	.74	.68	.50	.59	.49	.64	.43	.46
28. FWS Lexical	.41	.45	.48	.39	.38	.46	.44	.56	.49	.53	.62	.51	.58	.49	.37	.79	.79	.81	.62	.59
29. FWS Mechanical	.15	.21	.20	.15	.13	.12	.20	.19	.16	.11	.16	.06	.13	.15	.10	.06	.19	.12	.22	.26
30. FWS Composite	.65	.70	.69	.62	.57	.55	.57	.67	.65	.61	.67	.51	.61	.54	.37	.70	.69	.65	.56	.51
31. ECT Holistic	.42	.46	.44	.43	.36	.30	.36	.43	.33	.38	.50	.35	.40	.30	.16	.44	.51	.38	.36	.33
32. FWS Holistic	.64	.66	.59	.59	.57	.43	.50	.54	.57	.50	.58	.38	.51	.39	.24	.60	.58	.48	.40	.44
33. Total Holistic	.58	.61	.57	.56	.52	.40	.47	.53	.50	.48	.59	.40	.50	.38	.22	.57	.60	.47	.42	.42
34. SAT-V	.42	.46	.43	.38	.29	.32	.26	.40	.46	.41	.47	.27	.47	.24	.10	.36	.43	.28	.23	.27
35. Vocabulary	.35	.44	.45	.33	.26	.31	.19	.39	.43	.38	.45	.27	.49	.17	.10	.32	.38	.27	.23	.24
36. Reading	.43	.43	.36	.39	.29	.28	.28	.35	.43	.38	.43	.23	.39	.27	.08	.35	.41	.24	.22	.26
37. SAT-M	.21	.20	.21	.17	.12	.18	.12	.16	.26	.24	.22	.05	.22	.12	0	.24	.20	.12	.11	.20
38. TSWE	.39	.42	.41	.34	.28	.27	.35	.40	.47	.51	.54	.34	.52	.27	.13	.41	.44	.40	.30	.25
39. ECT Reported	.45	.49	.46	.39	.33	.32	.39	.46	.44	.47	.53	.37	.48	.28	.14	.48	.48	.38	.36	.33
40. ECT Objective	.40	.44	.40	.31	.27	.28	.36	.41	.45	.47	.47	.33	.46	.24	.11	.43	.39	.33	.32	.28

Table E-4. (Cont.).

Variable	Variable Number																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Statement of thesis	.18	.09	-.06	.02	.11	.75	.33	.41	.15	.65	.42	.64	.58	.42	.35	.43	.21	.39	.45	.40
2. Overall organization	.16	.20	-.02	.07	.15	.79	.37	.45	.21	.70	.46	.66	.61	.46	.44	.43	.20	.42	.49	.44
3. Rhetorical strategy	.20	.13	-.15	.02	.09	.78	.32	.48	.20	.69	.44	.59	.57	.43	.45	.36	.21	.41	.46	.40
4. Noteworthy ideas	.25	.03	.11	.14	.17	.76	.24	.39	.15	.62	.43	.59	.56	.38	.33	.39	.17	.34	.39	.31
5. Supporting material	.20	.01	.03	.15	.11	.72	.16	.38	.13	.57	.37	.57	.52	.29	.26	.29	.12	.28	.33	.27
6. Tone and attitude	.16	.02	-.05	.06	.08	.58	.29	.46	.12	.55	.30	.43	.40	.32	.31	.28	.18	.27	.32	.28
7. Paragraphing and transition	.19	.23	-.12	.20	.07	.56	.42	.44	.28	.57	.36	.50	.47	.26	.19	.28	.12	.35	.39	.36
8. Sentence variety	.22	.06	-.10	.11	.08	.64	.49	.56	.19	.67	.43	.54	.53	.40	.39	.35	.16	.40	.46	.41
9. Sentence logic	.07	-.06	-.14	.15	.15	.64	.47	.49	.16	.65	.33	.57	.50	.46	.43	.43	.26	.47	.44	.45
10. Pronoun usage	-.07	.03	-.10	.16	.05	.37	.83	.53	.11	.61	.38	.50	.48	.41	.38	.38	.24	.51	.47	.47
11. Subject-verb agreement	0	0	-.17	.19	.07	.42	.84	.62	.16	.67	.50	.58	.59	.47	.45	.43	.22	.54	.53	.47
12. Parallel structure	.02	-.02	.06	.09	.01	.29	.65	.51	.06	.51	.35	.38	.40	.27	.27	.23	.05	.34	.37	.33
13. Idiomatic usage	.08	-.09	-.13	.15	.09	.38	.74	.58	.13	.61	.40	.51	.50	.47	.49	.39	.22	.52	.48	.46
14. Punctuation	-.11	.04	-.12	.17	.15	.35	.68	.49	.15	.54	.30	.39	.38	.24	.17	.27	.12	.27	.28	.28
15. Use of modifiers	.09	.01	.02	.17	.04	.29	.50	.37	.10	.37	.16	.24	.22	.10	.10	.08	0	.13	.14	.11
16. Level of diction	.01	0	-.10	.07	-.01	.53	.59	.79	.06	.70	.44	.60	.57	.36	.32	.35	.24	.41	.48	.43
17. Range of vocabulary	.14	.01	-.09	.19	.16	.57	.49	.79	.19	.69	.51	.58	.60	.43	.38	.41	.20	.44	.48	.39
18. Precision of diction	-.05	-.03	-.16	.17	.06	.40	.64	.81	.12	.64	.38	.48	.47	.28	.27	.24	.12	.40	.38	.33
19. Figurative language	.15	.06	-.04	.16	.23	.46	.43	.62	.22	.56	.36	.40	.42	.23	.23	.22	.11	.30	.36	.32
20. Spelling (rating)	.02	0	-.41	.14	.12	.36	.46	.59	.26	.51	.33	.44	.42	.27	.24	.26	.20	.25	.33	.28
21. Essay length	1.00	.42	.03	.16	.11	.27	-.01	.06	.52	.17	.38	.28	.36	.16	.14	.16	-.04	.15	.27	.16
22. Paragraphs	.42	1.00	-.07	.09	.10	.13	-.01	0	.62	.08	.19	.09	.15	-.01	-.04	0	-.02	.03	.11	.04
23. Spelling errors	.03	-.07	1.00	-.04	.03	-.09	-.15	-.22	-.41	-.16	-.11	-.16	-.15	-.13	-.13	-.11	-.19	-.12	-.17	-.19
24. Handwriting	.16	.09	-.04	1.00	.68	.15	.22	.20	.66	.21	.15	.17	.17	.08	.11	.05	-.07	.15	.12	.09
25. Neatness	.11	.10	.03	.68	1.00	.16	.10	.14	.63	.17	.11	.10	.11	.12	.14	.08	0	.13	.12	.12
26. PWS Discourse	.27	.13	-.09	.15	.16	1.00	.48	.63	.26	.90	.56	.82	.75	.54	.50	.51	.25	.52	.59	.53
27. PWS Syntactic	-.01	-.01	-.15	.22	.10	.48	1.00	.73	.17	.78	.50	.63	.62	.49	.47	.45	.23	.57	.56	.51
28. PWS Lexical	.06	0	-.22	.20	.14	.63	.73	1.00	.23	.86	.56	.69	.69	.43	.40	.41	.24	.50	.56	.48
29. PWS Mechanical	.52	.62	-.41	.66	.63	.26	.17	.23	1.00	.27	.31	.26	.32	.15	.16	.13	.04	.20	.27	.21
30. PWS Composite	.17	.08	-.16	.21	.17	.90	.78	.86	.27	1.00	.63	.86	.82	.58	.54	.54	.28	.62	.67	.60
31. ECT Holistic	.38	.19	-.11	.15	.11	.56	.50	.56	.31	.63	1.00	.67	.91	.62	.56	.59	.27	.64	.85	.62
32. PWS Holistic	.28	.09	-.16	.17	.10	.82	.63	.69	.26	.86	.67	1.00	.92	.64	.58	.60	.26	.64	.72	.64
33. Total Holistic	.36	.15	-.15	.17	.11	.75	.62	.69	.32	.82	.91	.92	1.00	.69	.62	.65	.29	.70	.85	.69
34. SAT-V	.16	-.01	-.13	.08	.12	.54	.49	.43	.15	.58	.62	.64	.69	1.00	.91	.94	.57	.81	.80	.80
35. Vocabulary	.14	-.04	-.13	.11	.14	.50	.47	.40	.16	.54	.56	.58	.62	.91	1.00	.72	.48	.75	.73	.73
36. Reading	.16	0	-.11	.05	.08	.51	.45	.41	.13	.54	.59	.60	.65	.94	.72	1.00	.57	.74	.75	.74
37. SAT-M	-.04	-.02	-.19	-.07	0	.25	.23	.24	.04	.28	.27	.26	.29	.57	.48	.57	1.00	.44	.41	.44
38. TSWE	.15	.03	-.12	.15	.13	.52	.57	.50	.20	.62	.64	.64	.70	.81	.75	.74	.44	1.00	.82	.81
39. ECT Reported	.27	.11	-.17	.12	.12	.59	.56	.56	.27	.67	.85	.72	.85	.80	.73	.75	.41	.82	1.00	.94
40. ECT Objective	.16	.04	-.19	.09	.12	.53	.51	.48	.21	.60	.62	.64	.69	.80	.73	.74	.44	.81	.94	1.00

Table E-5. Matrix of Intercorrelations for Whites Who Reported That English Was Their Best Language

Variable	Variable Number																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Statement of thesis	1.00	.63	.57	.53	.54	.44	.40	.31	.40	.45	.26	.31	.25	.17	.16	.42	.37	.23	.22	.24
2. Overall organization	.63	1.00	.64	.56	.59	.51	.58	.42	.46	.33	.17	.30	.23	.14	.09	.48	.38	.29	.21	.25
3. Rhetorical strategy	.57	.64	1.00	.66	.65	.55	.46	.42	.41	.37	.21	.37	.27	.16	.02	.49	.49	.34	.37	.21
4. Noteworthy ideas	.53	.56	.66	1.00	.72	.55	.43	.43	.39	.35	.18	.28	.25	.13	.05	.47	.53	.40	.36	.25
5. Supporting material	.54	.59	.65	.72	1.00	.53	.41	.37	.37	.27	.13	.29	.20	.13	.03	.39	.44	.32	.32	.23
6. Tone and attitude	.44	.51	.55	.55	.53	1.00	.33	.46	.30	.26	.14	.29	.32	.14	.09	.44	.40	.34	.33	.22
7. Paragraphing and transition	.40	.58	.46	.43	.41	.33	1.00	.40	.43	.30	.19	.28	.31	.28	.14	.34	.28	.29	.19	.15
8. Sentence variety	.31	.42	.42	.43	.37	.46	.40	1.00	.46	.36	.14	.28	.38	.26	.20	.39	.42	.27	.24	.30
9. Sentence logic	.40	.46	.41	.39	.37	.30	.43	.46	1.00	.43	.26	.26	.35	.35	.16	.46	.43	.39	.19	.30
10. Pronoun usage	.45	.33	.37	.35	.27	.26	.30	.36	.43	1.00	.56	.46	.45	.45	.12	.45	.49	.31	.30	.26
11. Subject-verb agreement	.26	.17	.21	.18	.13	.14	.[illegible]	.14	.26	.56	1.00	.32	.25	.39	.10	.26	.37	.27	.21	.30
12. Parallel structure	.31	.30	.37	.28	.29	.29	.28	.28	.26	.46	.32	1.00	.29	.43	.16	.34	.42	.21	.30	.23
13. Idiomatic usage	.25	.23	.27	.25	.20	.32	.31	.38	.35	.45	.25	.29	1.00	.35	.20	.44	.36	.32	.32	.36
14. Punctuation	.17	.14	.16	.13	.13	.14	.28	.26	.35	.45	.39	.43	.35	1.00	.21	.31	.31	.31	.20	.32
15. Use of modifiers	.16	.09	.02	.05	.03	.09	.14	.20	.16	.12	.10	.16	.20	.21	1.00	.17	.04	.14	.16	.17
16. Level of diction	.42	.48	.49	.47	.39	.44	.34	.39	.46	.45	.26	.34	.44	.31	.17	1.00	.15	.45	.29	.32
17. Range of vocabulary	.37	.38	.49	.53	.44	.40	.28	.42	.43	.49	.37	.42	.36	.31	.04	.55	1.00	.46	.40	.37
18. Precision of diction	.23	.29	.34	.40	.32	.34	.29	.27	.39	.31	.27	.21	.32	.31	.14	.45	.46	1.00	.33	.30
19. Figurative language	.22	.21	.37	.36	.32	.33	.19	.24	.19	.30	.21	.30	.32	.20	.16	.29	.40	.33	1.00	.15
20. Spelling (rating)	.24	.25	.21	.25	.23	.22	.15	.30	.30	.26	.30	.23	.36	.32	.17	.32	.37	.30	.15	1.00
21. Essay length	.34	.41	.36	.39	.41	.29	.26	.21	.22	.16	.04	.18	.06	.05	.02	.27	.26	.06	.11	.17
22. Paragraphs	.23	.33	.14	.25	.24	.16	.33	.12	.16	.16	.13	.11	.07	.11	.02	.12	.15	.09	.04	.13
23. Spelling errors (count)	-.06	-.17	-.12	.16	-.16	-.22	-.13	-.23	-.27	-.01	-.13	-.10	-.23	-.16	-.08	-.22	-.18	-.29	-.05	-.49
24. Handwriting	.03	.14	.11	.03	.03	.11	.13	.10	.06	.11	.03	.01	.13	.02	.04	.08	.06	.13	.06	.04
25. Neatness	.01	.13	.11	.02	-.01	.14	.14	.21	.12	.18	.09	.03	.20	.14	.07	.11	.17	.17	.15	.11
26. FWS Discourse	.73	.82	.82	.81	.81	.69	.65	.61	.61	.45	.23	.39	.37	.24	.13	.57	.56	.43	.37	.33
27. FWS Syntactic	.40	.32	.36	.32	.27	.31	.38	.41	.46	.80	.69	.68	.64	.75	.36	.50	.52	.40	.37	.42
28. FWS Lexical	.42	.47	.54	.58	.49	.49	.36	.46	.51	.52	.41	.43	.51	.42	.19	.75	.81	.74	.58	.61
29. FWS Mechanical	.22	.39	.26	.28	.27	.31	.34	.29	.28	.19	.15	.14	.23	.16	.07	.26	.26	.24	.13	.30
30. FWS Composite	.69	.74	.77	.77	.73	.66	.62	.62	.64	.61	.41	.52	.52	.43	.22	.69	.69	.57	.48	.47
31. ECT Holistic	.38	.32	.46	.47	.47	.29	.42	.33	.39	.26	.16	.31	.18	.21	.11	.39	.30	.26	.13	.29
32. FWS Holistic	.72	.76	.70	.75	.77	.54	.58	.48	.53	.45	.26	.35	.30	.28	.12	.55	.53	.42	.26	.32
33. Total Holistic	.63	.73	.66	.70	.71	.48	.57	.46	.52	.41	.24	.37	.27	.28	.13	.53	.48	.39	.23	.35
34. SAT-V	.33	.33	.36	.39	.42	.28	.20	.29	.34	.24	.13	.24	.14	.17	.01	.31	.24	.18	.11	.11
35. Vocabulary	.28	.31	.31	.34	.37	.24	.19	.29	.31	.22	.11	.21	.14	.14	.03	.29	.23	.12	.09	.06
36. Reading	.34	.33	.36	.41	.44	.28	.19	.27	.33	.24	.13	.24	.14	.17	0	.31	.23	.21	.13	.14
37. SAT-M	.13	.20	.15	.18	.14	.12	.12	.03	.13	.11	.05	.15	.08	.11	.08	.22	.05	-.01	.14	-.02
38. TSWE	.26	.28	.30	.27	.27	.20	.23	.24	.28	.27	.25	.28	.14	.25	.09	.31	.23	.14	.12	.13
39. ECT Reported	.36	.44	.44	.42	.43	.34	.35	.33	.36	.30	.26	.30	.23	.24	.09	.42	.33	.23	.08	.25
40. ECT Objective	.31	.35	.38	.33	.36	.32	.27	.29	.30	.28	.26	.25	.23	.23	.07	.38	.30	.19	.05	.19

Table E-5 (Cont.).

Variable	Variable Number																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1. Statement of thesis	.34	.23	-.06	.03	.01	.73	.40	.42	.22	.69	.38	.72	.63	.33	.28	.34	.13	.26	.36	.31
2. Overall organization	.41	.33	-.17	.14	.13	.82	.32	.47	.39	.74	.52	.76	.73	.33	.31	.33	.20	.28	.44	.35
3. Rhetorical strategy	.36	.14	-.12	.11	.11	.82	.36	.34	.26	.77	.46	.70	.66	.36	.32	.36	.15	.30	.44	.38
4. Noteworthy ideas	.39	.25	-.16	.03	.02	.81	.32	.58	.28	.77	.47	.75	.70	.39	.34	.41	.18	.27	.42	.33
5. Supporting material	.41	.24	-.16	.03	-.01	.81	.27	.49	.27	.73	.47	.77	.71	.42	.37	.44	.14	.27	.43	.36
6. Tone and attitude	.29	.16	-.22	.11	.14	.69	.31	.49	.31	.66	.29	.54	.48	.28	.24	.28	.12	.20	.34	.32
7. Paragraphing and transition	.26	.33	-.13	.13	.14	.65	.38	.36	.34	.62	.42	.58	.57	.20	.19	.19	.12	.23	.35	.27
8. Sentence variety	.21	.12	-.23	.10	.21	.61	.41	.46	.29	.62	.33	.48	.47	.29	.29	.27	.03	.24	.33	.29
9. Sentence logic	.22	.16	-.27	.06	.12	.61	.46	.51.	.28	.64	.39	.53	.52	.34	.31	.33	.13	.28	.36	.30
10. Pronoun usage	.16	.16	-.01	.11	.18	.45	.80	.52	.19	.61	.26	.45	.41	.24	.22	.24	.11	.27	.30	.28
11. Subject-verb agreement	.04	.13	-.13	.03	.09	.23	.69	.41	.15	.41	.16	.26	.24	.13	.11	.13	.05	.25	.26	.26
12. Parallel structure	.18	.11	-.10	.01	.03	.39	.68	.43	.14	.52	.31	.35	.37	.24	.21	.24	.15	.28	.30	.25
13. Idiomatic usage	.06	.07	-.23	.13	.20	.37	.64	.51	.23	.52	.18	.30	.27	.14	.14	.14	.08	.14	.23	.23
14. Punctuation	.05	.11	-.16	.02	.14	.24	.75	.42	.16	.43	.21	.28	.28	.17	.14	.17	.11	.25	.24	.22
15. Use of modifers	.02	.02	-.08	.04	.07	.13	.36	.19	.07	.22	.11	.12	.13	.01	.03	0	.08	.09	.09	.07
16. Level of diction	.27	.12	-.22	.08	.11	.57	.50	.75	.26	.69	.39	.55	.53	.31	.29	.31	.22	.32	.42	.38
17. Range of vocabulary	.26	.15	-.18	.06	.17	.56	.52	.81	.26	.69	.30	.53	.48	.24	.23	.23	.05	.23	.33	.30
18. Precision of diction	.06	.09	-.29	.13	.17	.43	.40	.74	.24	.57	.26	.42	.39	.18	.12	.21	-.01	.14	.23	.19
19. Figurative language	.11	.04	-.05	.06	.15	.37	.37	.58	.13	.48	.13	.26	.23	.11	.09	.13	.14	.12	.08	.05
20. Spelling (rating)	.17	.13	-.49	.04	.11	.33	.42	.61	.30	.47	.29	.32	.35	.11	.06	.14	-.02	.13	.25	.19
21. Essay length	1.00	.53	-.11	.12	.03	.45	.13	.25	.57	.40	.51	.41	.57	.22	.19	.23	.12	.14	.37	.25
22. Paragraphs	.53	1.00	-.06	.22	.19	.30	.16	.16	.69	.28	.38	.28	.37	.11	.11	.10	.01	.12	.30	.23
23. Spelling errors	-.11	-.06	1.00	.02	.05	-.23	-.18	-.35	-.40	-.29	-.24	-.24	-.27	-.14	-.11	-.15	-.01	-.14	-.25	-.21
24. Handwriting	.12	.22	.02	1.00	.68	.10	.08	.11	.66	.12	.16	.06	.12	-.06	-.07	-.04	-.15	.04	.12	.07
25. Neatness	.03	.19	-.05	.68	1.00	.12	.18	.20	.65	.17	.20	.07	.15	-.04	-.07	-.02	-.06	.06	.15	.09
26. FWS Discourse	.45	.30	-.23	.10	.12	1.00	.46	.65	.40	.94	.57	.90	.84	.44	.39	.45	.18	.34	.53	.44
27. FWS Syntactic	.13	.16	-.18	.08	.18	.46	1.00	.63	.24	.69	.31	.45	.43	.24	.22	.24	.14	.33	.37	.34
28. FWS Lexical	.25	.16	-.35	.11	.20	.65	.63	1.00	.34	.83	.40	.60	.57	.28	.23	.29	.10	.27	.38	.32
29. FWS Mechanical	.57	.69	-.40	.66	.65	.40	.24	.34	1.00	.41	.50	.37	.49	.13	.09	.14	-.02	.18	.41	.30
30. FWS Composite	.40	.28	-.29	.12	.17	.94	.69	.83	.41	1.00	.56	.86	.81	.42	.37	.43	.18	.37	.53	.45
31. ECT Holistic	.51	.38	-.24	.16	.20	.57	.31	.40	.50	.56	1.00	.56	.87	.54	.51	.53	.33	.56	.79	.57
32. FWS Holistic	.49	.28	-.24	.06	.07	.90	.45	.60	.37	.86	.56	1.00	.89	.42	.36	.43	.13	.35	.52	.43
33. Total Holistic	.57	.37	-.27	.12	.15	.84	.43	.57	.49	.81	.87	.89	1.00	.54	.49	.54	.26	.51	.73	.56
34. SAT-V	.22	.11	-.14	-.06	-.04	.44	.24	.28	.13	.42	.54	.42	.54	1.00	.95	.96	.49	.67	.70	.69
35. Vocabulary	.19	.11	-.11	-.07	-.07	.39	.22	.23	.09	.37	.51	.36	.49	.95	1.00	.82	.45	.64	.68	.67
36. Reading	.23	.10	-.15	-.04	-.02	.45	.24	.29	.14	.43	.53	.43	.54	.96	.82	1.00	.49	.64	.66	.64
37. SAT-M	.12	.01	-.01	-.15	-.06	.18	.14	.10	-.02	.18	.33	.13	.26	.49	.45	.49	1.00	.49	.44	.42
38. TSWE	.14	.12	-.14	.04	.06	.34	.33	.27	.18	.37	.56	.35	.51	.67	.64	.64	.49	1.00	.76	.75
39. ECT Reported	.37	.30	-.25	.12	.15	.53	.37	.38	.41	.53	.79	.52	.73	.70	.68	.66	.44	.76	1.00	.95
40. ECT Objective	.25	.23	-.21	.07	.09	.44	.34	.33	.30	.45	.57	.43	.56	.69	.67	.64	.42	.75	.95	1.00

Appendix F. Regression Analyses

Table F-1. Estimates of Regression Parameters—ECT Essay on Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Pooled (806)	2. Overall Organization	1.3829/ .5949	.1783	.2370	.0306
	4. Noteworthy Ideas		.1114	.1551	.0306
	9. Sentence Logic		.1190	.1213	.0326
	5. Supporting Material		.0852	.1322	.0278
	7. Paragraphs, Transition		.1003	.1104	.0328
Pooled (806)	12. Parallel Structure	1.4465/ .3363	.3909	.2336	.0624
	10. Pronoun Usage		.2317	.1584	.0543
Pooled (806)	16. Level of Diction	1.0886/ .4385	.3771	.3033	.0453
	20. Spelling		.2159	.1680	.0437
	18. Precision of Diction		.1007	.0869	.0420
Pooled (806)	2. Overall Organization	.1116/ .6139	.1535	.2041	.0308
	4. Noteworthy Ideas		.0898	.1250	.0308
	20. Spelling		.1344	.1045	.0389
	7. Paragraphs, Transition		.0978	.1077	.0325
	12. Parallel Structure		.1374	.0821	.0514
	5. Supporting Material		.0782	.1214	.0274
	9. Sentance Logic		.0725	.0738	.0337
	16. Level of Diction		.0753	.0606	.0440

Table F-2. Estimates of Regression Parameters—ECT Essay on ECT Objective and Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Pooled (806)	40. ECT Objective	1.3231/ .6936	.0436	.3980	.0031
	2. Overall Organization		.1362	.1810	.0276
	4. Noteworthy Ideas		.0901	.1255	.0275
	7. Paragraphs, Transition		.0881	.0970	.0294
	9. Sentence Logic		.0641	.0653	.0295
	5. Supporting Material		.0406	.0629	.0251
Pooled (806)	40. ECT Objective	1.6653/ .6031	.0588	.5371	.0032
	12. Parallel Structure		.2873	.1717	.0486
Pooled (806)	40. ECT Objective	1.1053/ .6277	.0535	.4882	.0033
	16. Level of Diction		.1652	.1328	.0413
	20. Spelling		.1697	.1320	.0380
	18. Precision of Diction		.8572	.0740	.0364
Pooled (806)	40. ECT Objective	.3871/ .7008	.0428	.3908	.0031
	2. Overall Organization		.1357	.1804	.0266
	4. Noteworthy Ideas		.1037	.1443	.0229
	20. Spelling		.1209	.0940	.0348
	7. Paragraphs, Transition		.0885	.0975	.0293
	12. Parallel Structure		.0930	.0556	.0459
	9. Sentence Logic		.0411	.0419	.0298

Table F-3. Estimates of Regression Parameters--ECT Essay on Mechanical Scores, ECT Objectives, and Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Pooled (806)	40. ECT Objective	1.8378/ .7103	.0492	.4494	.0029
	21. Essay Length		.0471	.3792	.0032
	25. Neatness		.1812	.1419	.0319
	23. Spelling Errors		-.1100	-.0955	.0293
Pooled (806)	40. ECT Objective	.0988/ .7422	.0408	.3724	.0029
	21. Essay Length		.0351	.2823	.0034
	2. Overall Organization		.0903	.1201	.0252
	7. Paragraphs, Transition		.0920	.1014	.0272
	4. Noteworthy Ideas		.0528	.0735	.0226
	12. Parallel Structure		.0808	.0483	.0432
	20. Spelling		.1049	.0816	.0330
	18. Precision of Diction		.0533	.0460	.0316
Pooled (806)	21. Essay Length	2.8266/ .5764	.0531	.4275	.0042
	25. Neatness		.2047	.1603	.0377
	23. Spelling Errors		-.2026	-.1761	.0334
	22. Paragraphs		.1162	.1105	.0362

Table F-4. Estimates of Regression Parameters–ECT Essay on Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Black (202)	1. Statement of Thesis	1.1171/ .5158	.1756	.2414	.0521
	8. Sentence Variety		.2485	.2438	.0671
	4. Noteworthy Ideas		.1405	.1895	.0520
Black (202)	11. Subject-verb agreement	1.1422/ .3950	.3751	.3109	.0833
	14. Punctuation		.1986	.1612	.0851
Black (202)	16. Level of Diction	1.4403/ .4083	.3240	.2679	.0880
	18. Precision of Diction		.2013	.2090	.0701

Table F-5. Estimates of Regression Parameters–ECT Essay on Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Hispanic (M) (200)	2. Overall organization	.3782/ .5569	.1784	.2045	.0697
	8. Sentence Variety		.2921	.2854	.0672
	1. Statement of Thesis		.1802	.2172	.0625
Hispanic (M) (200)	11. Subject-Verb Agreement	.0974/ .5244	.4013	.4230	.0626
	12. Parallel Structure		.3134	.1851	.1118
Hispanic (M) (200)	17. Range of Vocabulary	-.4004/ .5665	.382	.3649	.0767
	20. Spelling		.2195	.1787	.0766
	16. Level of Diction		.1989	.1694	.0865

Table F-6. Estimates of Regression Parameters–ECT Essay on Taxonomy Characteristics

Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
Hispanic (Y) (202)	5. Supporting Materials	.9526/ .5632	.1944	.2977	.0451
	8. Sentence Variety		.2476	.2201	.0727
	1. Statement of Thesis		.1593	.2037	.0559
Hispanic (Y) (202)	15. Use of Modifiers	-3.8508/ .3658	.9043	.2425	.2490
	11. Subject-Verb Agreement		.2960	.1871	.1065
	13. Idiomatic Usage		.2199	.1430	.1046
Hispanic (Y) (202)	16. Level of Diction	1.6051/ .3403	.3246	.2440	.0973
	18. Precision of Diction		.1903	.1571	.0887

Table F-7. Estimates of Regression Parameters–ECT Essay on Taxonomy Characteristics

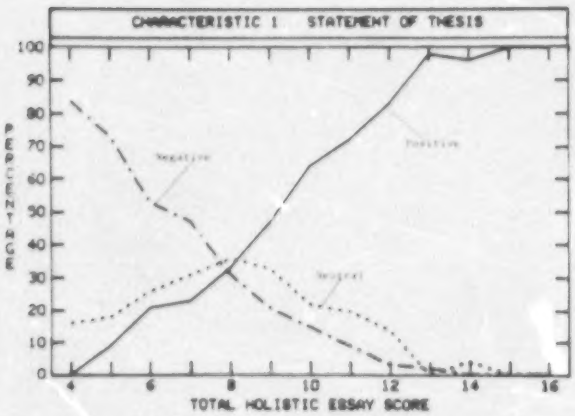
Sample (cases)	Significant Predictors	Intercept/ Multiple R	Raw Coefficient (B_1)	Standardized Coefficient (β)	S.E. of B_1
White (202)	2. Overall Organization	1.9011/ .5777	.2376	.3184	.0550
	4. Noteworthy Ideas		.1689	.2372	.0507
	9. Sentence Logic		.1424	.1468	.0644
White (202)	12. Parallel Structure	1.6003/ .3335	.3880	.2378	.1229
	10. Pronoun Usage		.2170	.1486	.1100
White (202)	16. Level of Diction	1.3717/ .4305	.4082	.3321	.0829
	20. Spelling		.2403	.1886	.0859

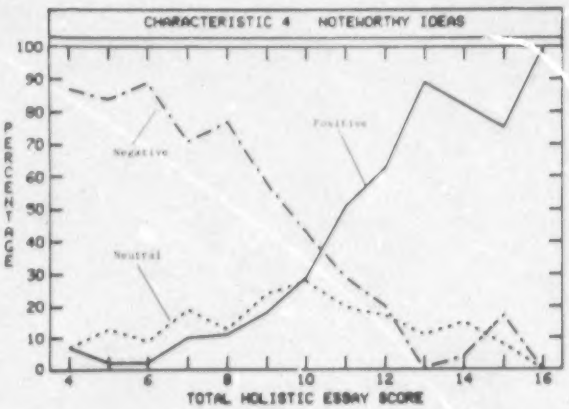
Table F-8. Reliability Estimates for Characteristics Score Composites and Holistic Scores[a]

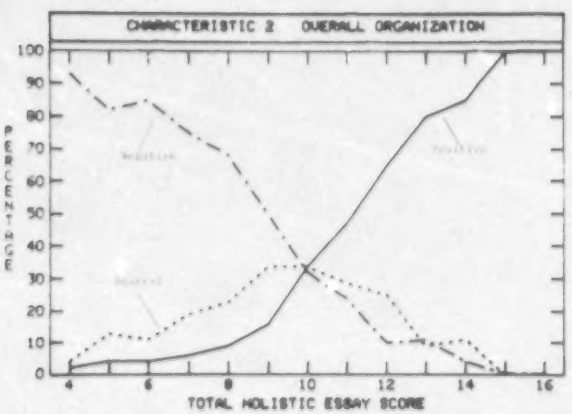
Variable	Sample				
	Pooled (N=806)	Black (N=202)	Hispanic-N (N=200)	Hispanic-Y (N=202)	White (N=202)
26. PWS Discourse	.65	.64	.61	.54	.64
27. PWS Syntactic	.23	.25	.60	.09	.22
28. PWS Lexical	.36	.33	.44	.22	.35
30. PWS Composite	.58	.58	.64	.48	.57
31. ECT Holistic	.74	.71	.83	.75	.74
32. PWS Holistic	.62	.66	.71	.64	.60
33. Total Holistic	.77	.78	.84	.79	.76

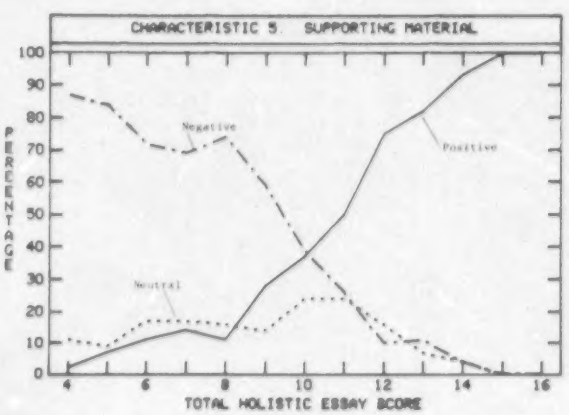
[a]Coefficient alpha.

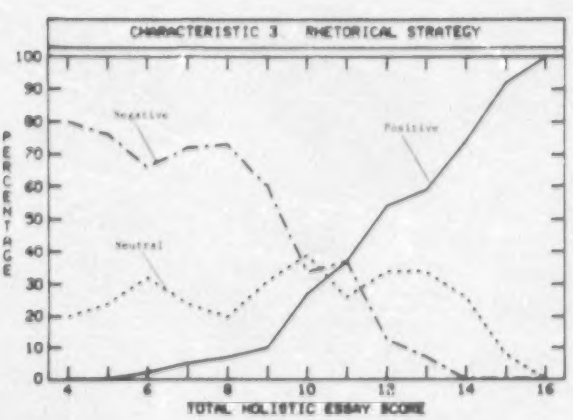
Appendix G. Analyses by Score Level: Postive, Negative, and Neutral Perceptions of Writing Skill

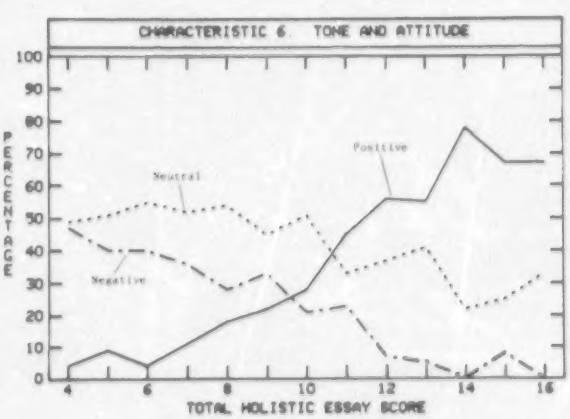


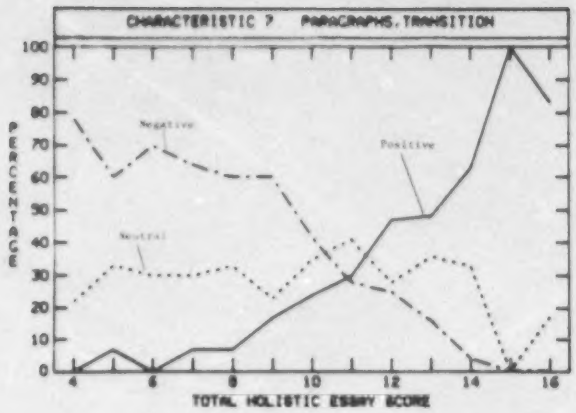








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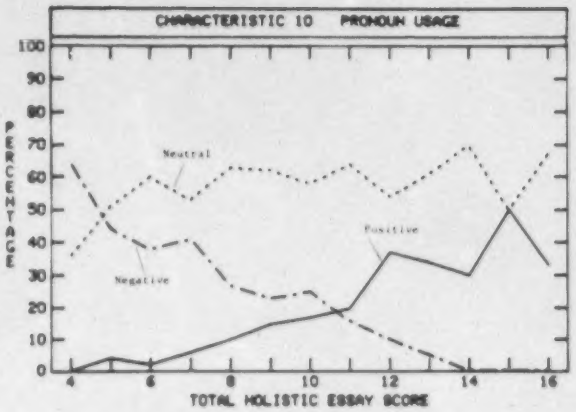
PERCENTAGE
Negative
Positive
Neutral
TOTAL HOLISTIC ESSAY SCORE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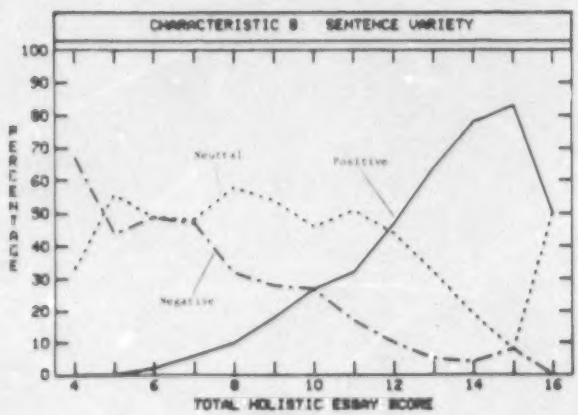
PERCENTAGE
Neutral
Positive
Negative
TOTAL HOLISTIC ESSAY SCORE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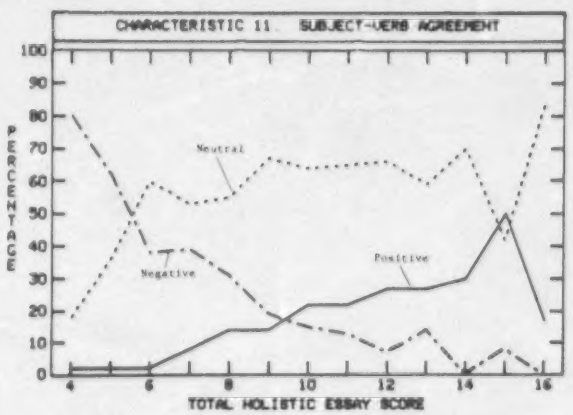
PERCENTAGE
Neutral
Positive
Negative
TOTAL HOLISTIC ESSAY SCORE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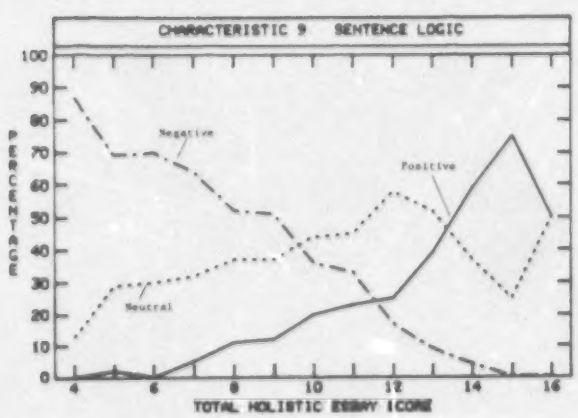
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE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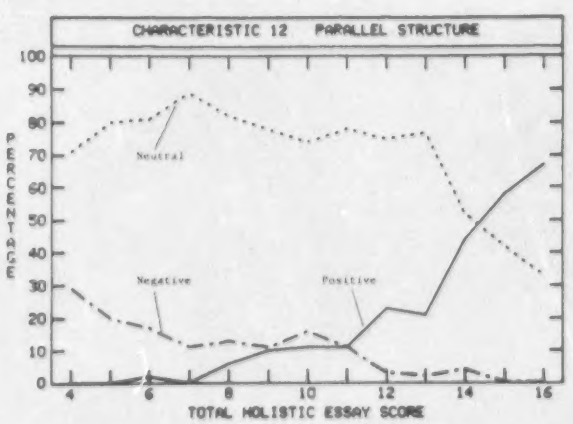
PERCENTAGE
Negative
Positive
Neutral
TOTAL HOLISTIC ESSAY SCORE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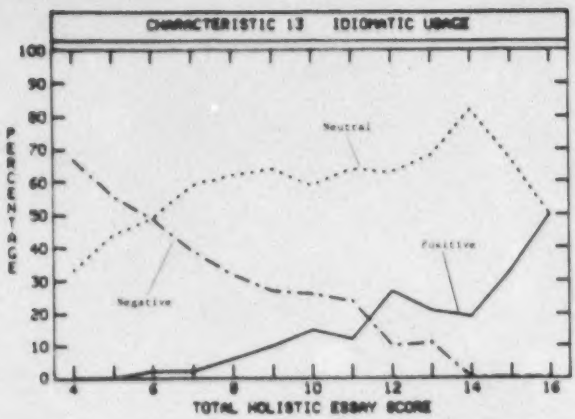
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE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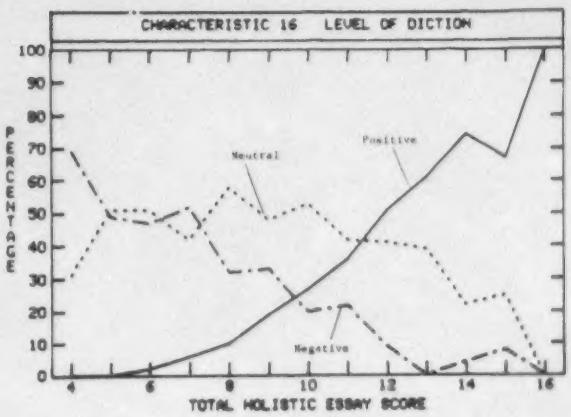
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE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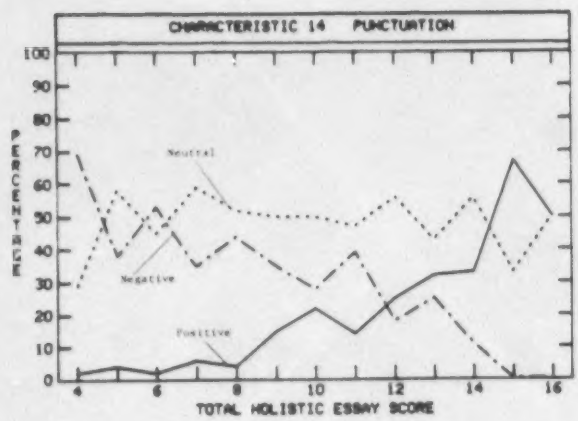
PERCENTAGE
Neutral
Positive
Negative
TOTAL HOLISTIC ESSAY SCORE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PERCENTAGE
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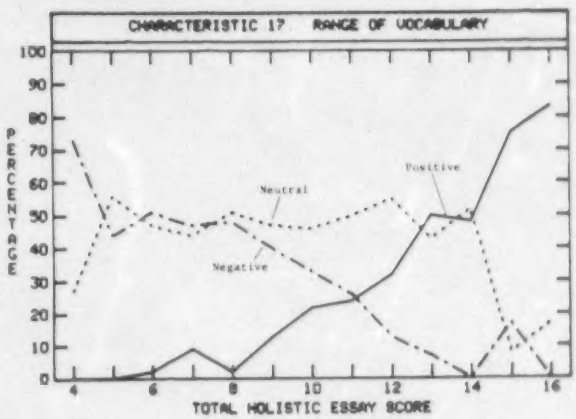
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE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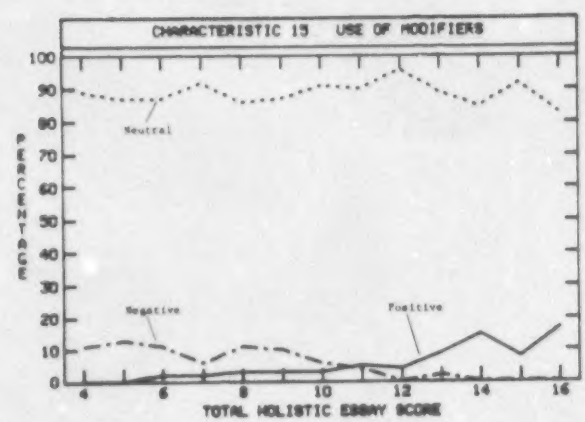
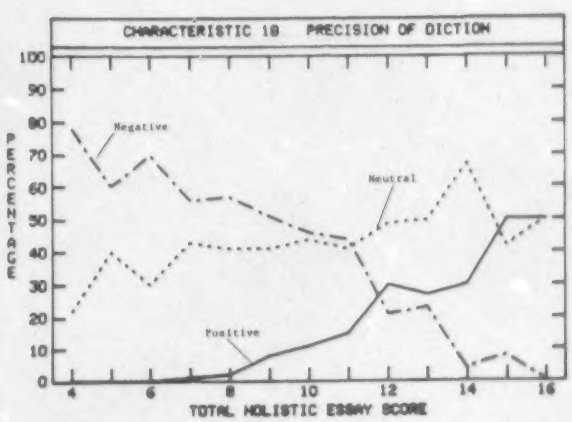
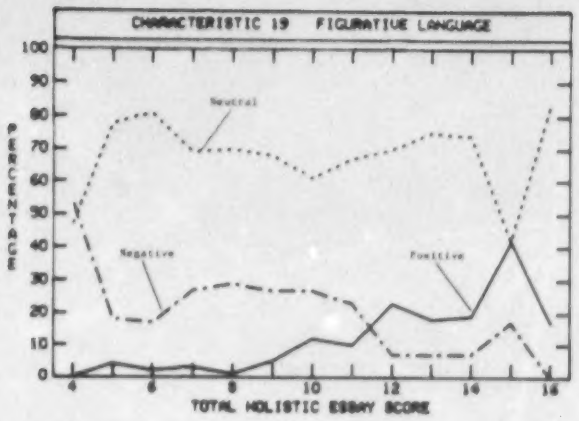
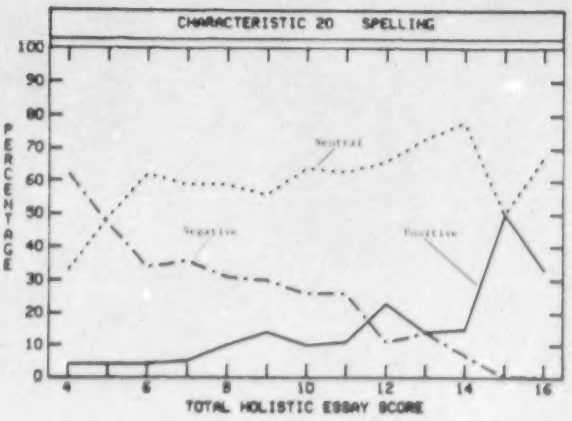
PERCENTAGE
Neutral
Positive
Negative
TOTAL HOLISTIC ESSAY SCORE


CHARACTERISTIC 15 USE OF MODIFIERS
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE


CHARACTERISTIC 18 PRECISION OF DICTION
PERCENTAGE
Negative
Neutral
Positive
TOTAL HOLISTIC ESSAY SCORE


CHARACTERISTIC 19 FIGURATIVE LANGUAGE
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE


CHARACTERISTIC 20 SPELLING
PERCENTAGE
Neutral
Negative
Positive
TOTAL HOLISTIC ESSAY SCORE

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000
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PROGRAM RESEARCH OFFICE

September 12, 1980

(Addressed to participating readers)

We are glad that you will be participating in our special study, Perceptions of Writing Skill. Enclosed is a questionnaire that we would like you to complete and return to us in the envelope provided. We would prefer to receive it prior to your arrival for the reading on September 27. If you don't have time to complete it in advance and mail it, please bring it with you.

The project has as one objective the determination of the relative weights that English teachers, nationally, place on different writing characteristics. These may be positive or negative characteristics. The questionnaire is only an initial step in estimating relative influences. We will be working in much greater detail with these influences during the reading and afterwards in our analyses.

Thank you for your interest in the project. I look forward to meeting you on the 27th.

Sincerely,

Hunter M. Breland

Reader Questionnaire (Part I)

1. What do you believe to be the most important characteristic of good, brief expository writing?

2. What other characteristics of good, brief expository writing are also especially important, in your opinion? List as many as three characteristics.

Reader Questionnaire (Part II)

Instructions: Below are listed eighteen characteristics that are often used to judge a piece of writing. Please check one of the four columns at the right to indicate how much influence you believe each characteristic usually has in your own judgments of essays written in response to questions such as that used in the Dec. 1979 ECT essay (a copy of the question used is attached).

	Influence			
	Very Heavy	Heavy	Some	None
GENERAL CHARACTERISTICS				
1. Statement of thesis and purpose (explicit or implicit)	___	___	___	___
2. Overall organization	___	___	___	___
3. Rhetorical strategy and logic	___	___	___	___
4. Noteworthy ideas: Originality of thought or insight	___	___	___	___
5. Use of supporting materials: examples, illustrations, personal experience, facts, statistics, etc.	___	___	___	___
6. Writer's voice: tone and attitude	___	___	___	___
7. Effective paragraphing, transition	___	___	___	___
8. Variety of sentence patterns, fragments; run-ons	___	___	___	___
SYNTACTICAL CHARACTERISTICS				
9. Pronoun usage: agreement with antecedent, case, etc.	___	___	___	___
10. Subject-Verb agreement, verb forms, etc.	___	___	___	___
11. Parallel structure and misplaced modifiers	___	___	___	___
12. Idiomatic usage: prepositions and phrases	___	___	___	___
13. Punctuation: comma, semicolon, end marks, etc.	___	___	___	___
LEXICOGRAPHIC CHARACTERISTICS				
14. Appropriate levels of diction	___	___	___	___
15. Range of vocabulary	___	___	___	___
16. Precision of diction and phrasing	___	___	___	___
17. Use of figurative language: metaphor, analogy, simile	___	___	___	___
18. Spelling	___	___	___	___

Appendix I. Participating Readers and Affiliations

Mark Alvin Christiansen
University of Tennessee
Knoxville, Tennessee

*Robert Christopher
Ramapo College
Mahwah, New Jersey

Martha H. Cox
San Jose State University
San Jose, California

*Paul M. Cubeta
Middlebury College
Middlebury, Vermont

Bob R. Dowell
Pan American College
Edinburg, Texas

Sister Ann Edward
Chestnut Hill College
Philadelphia, Pennsylvania

*Paul Eschholz
University of Vermont
Burlington, Vermont

J. Arthur Faber
Wittenberg University
Springfield, Ohio

Warren Herendeen
Mercy College
Dobbs Ferry, New York

Bernice Kliman
Nassau Community College
Garden City, New York

Martha Kolln
Pennsylvania State University
University Park, Pennsylvania

Gloria Gardia McCullough
California State University: Long Beach
Long Beach, California

Avis Edward Meyer
St. Louis University
St. Louis, Missouri

O. B. Moor, Jr.
Ohio State University
Columbus, Ohio

James Plett
Greenville College
Greenville, Illinois

Betty Richardson
Southern Illinois University
Edwardsville, Illinois

W. Lynne Spigelmire
Boston University
Boston, Massachusetts

Margaret A. Strom
The University of Maine
Orono, Maine

*Michael Sundell
George Mason University
Fairfax, Virginia

Elsie Woodard
Johnson C. Smith University
Charlotte, North Carolina

*Table leaders.